UNITED
NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/1992/14/Add.1 (Part I)
26 May 1992

ARABIC/ENGLISH/FRENCH ONLY

Substantive session of 1992
29 June-30 July 1992
Item 11 of the provisional agenda*

REGIONAL COOPERATION

Second Industrial Development Decade for Africa

Note by the Secretary-General

Addendum

A programme for the Second Industrial Development Decade for Africa (1991-2000)

Self-sustained development through industrialization**

Volume I

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* E/1992/100.

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PART A. INTRODUCTION

I. PREAMBLE

1. The programme for the second Industrial Development Decade for Africa covering the last 10 years of this century, contained in this document is the result of joint and cooperative thinking of African Governments, African policy makers, African planners, African scholars, African officials and African managers. The programme which has emerged is not a rigid centralized model thrust on the African Governments. It has come from the grass roots. It has been prepared by individual countries based on the realities of their current socio-economic situation. It reflects the joint will of the African people.

2. The fundamental premises on which the programme for the second IDDA are based, include:

* the frank recognition that Africa is the poorest region of the world and that despite the efforts which have been made over the past 30 years, Africa continues to be an area of poverty, ignorance and dependence.

* the firm belief that this deplorable situation can and must be changed, keeping in view Africa's enormous natural resources and the will of its people to become equal partners in the international community.

* the reaffirmation of the concepts and goals of the Lagos Plan of Action and the objectives set out in the first IDDA, namely the attainment of self-reliance and self-sustainment.

* the conviction of the need to transform Africa from a continent largely producing and exporting primary commodities to a more balanced economy which in addition to agriculture and food production, will also produce the goods and services which Africa needs and consumes.

* the recognition that such a transformation and the consequent achievement of self-reliance, can only come about through the process of industrialization.

* the need to plan the industrial development of African countries on the basis of their domestic strengths and natural resources and to make the maximum use of domestic factor inputs.

* the recognition that industrial development should, under no circumstances, be at the expense of healthy agricultural growth and food production, which are undoubtedly high-priority areas and the further recognition of the intimate interrelationship between agriculture and industry.

* the need to ensure that industrial development in Africa will not cause environmental degradation.

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* the anticipation and hope that the international community will extend its assistance, technically and financially, to the efforts being promoted in IDDA II. While welcoming such bilateral and multilateral aid, the recognition that tied financial aid be so adjusted that it supports the development of the recipient country.

* while welcoming such bilateral and multilateral aid, the firm belief that the principal responsibility for the execution of the programme rests fairly and squarely, on the shoulders of the African Governments and peoples.

* the belief that, while African Governments will necessarily have to play a lead role in formulating industrial policies, in building the required infrastructure and in creating an enabling environment, the success of the programme will need the fullest participation of the private sector, foreign investors, small-scale industry, the self-employed, professionals, managers and the people as a whole.

* in consequence, the urgent necessity of building and strengthening African capabilities in planning, administration, technology, management and entrepreneurship, a major factor in promoting self-reliance.

* the need to learn from the lessons of the past and in particular to ensure the productivity and optimum performance of industrial investments.

* the necessity of promoting South-South cooperation particularly for seeking technological solutions more adapted to the conditions of developing countries.

* the recognition that the size and vulnerability of most African countries makes it virtually impossible to pursue paths of isolation and calls for the creation of wider markets and joint investments on the basis of regional and subregional cooperation, creation of subregional markets and penetration of export markets on a competitive basis.

* the firm conviction that Structural Adjustment Programmes would not succeed unless they are integrated into national development plans to achieve industrialization and satisfaction of the basic needs of the people.

II. A REVIEW OF THE FIRST IDDA

3. The starting point of planning for the second IDDA must necessarily be a candid appraisal of what actually transpired during the previous decade (1981-1990), the period covering the first IDDA. This exercise has to be done courageously and shorn of rhetoric, in order to learn from the lessons of the past and to direct the new programmes on more realistic lines.

4. Such an appraisal was made in 1988 by an independent team of experts, whose report was endorsed by an intergovernmental group of officials and

finally by the Council of African Ministers of Industry at its meeting held at Harare, Zimbabwe in May 1989.

5. The principal findings of the review are the following:

1. Identifying the character of IDDA I

6. IDDA I was a composite set of approaches including a proclamation of goals, a set of guidelines, techno-economic guidance regarding core and strategic industries and estimates on the quantum and direction of suggested industrial investments.

7. The strength of this composite approach was the definition of goals emerging from the Lagos Plan of Action, the provision of a broad framework within which individual countries could design their industrial development strategies and the flexibility which was left to individual countries to develop their industrial plans based on their own circumstances.

8. On the other hand, the approach was over-optimistic about the practical possibilities of making major industrial investments and achieving regional cooperation. It did not pay adequate attention to the economics of investment and to resource availability.

2. Developments during the decade

9. Well-intentioned as the conception of IDDA I was, it was overtaken by circumstances. Amongst the internal factors which adversely affected the programme were unstable political situations, natural calamities, excessively high population growth, low productivity, poor performance of public enterprises and an over-dominant position of the state sector with inadequate involvement of entrepreneurial forces. Among the adverse external factors were world recessionary conditions, decline in commodity prices, rise in costs of imported inputs and reduction of external aid in real terms.

10. In consequence of the above factors, the performance of African economies during the decade was most disappointing. Per capita incomes declined, agricultural output did not keep pace with population growth resulting in food deficits; the investments in core and strategic industries did not materialize and output from existing capital assets was discouragingly low. At the end of the decade, Africa faced a very heavy debt burden, having risen 19-fold since 1970. The stark reality of Africa's performance is revealed by the fact that in 1987 sub-Saharan Africa with a population of 450 million had a GDP of US$ 135 billion, equal to that of Belgium, which has only 10 million inhabitants.

11. This dismal record and the crisis facing Africa was recognized by African leaders and during the course of the decade, some significant developments occurred including:

- Adoption of the APPER declaration of African Heads of State and Governments, laying particular stress on agricultural development and debt reduction;
- Adoption by the United Nations General Assembly of UNPAAERD which lent support to the APPER approach;
- Adoption by several African countries of Structural Adjustment Programmes and policy reforms guided by the World Bank and International Monetary Fund (IMF), which were not entirely in line with the Lagos Plan of Action and the strategy of IDDA I.

3. Responses of national Governments to IDDA I

12. It was abundantly clear that the success or otherwise of the first IDDA would depend on the nature and intensity of the response of the national Governments to the guidelines which were issued.

13. In principle, the African countries unreservedly supported the concepts, goals and strategies of the Lagos Plan of Action and of IDDA, in particular the objectives of self-reliance and self-sustainment, promotion of the use of domestic factor inputs and stimulation of internal engines of growth. The national Governments endorsed the view that industrialization held the key to socio-economic advancement. Most of them adopted national planning as an instrument of development and shared the belief in pan-African solidarity and regional cooperation.

14. In practice, however, the implementation of the first IDDA was not quite so encouraging. With very few exceptions, the African countries did not set up focal points or coordinating committees or prepare investment portfolios of core and priority industries or deploy resources specifically for IDDA projects, all of which were visualized under the guidelines. This seeming indifference to the guidelines should not be interpreted as a lack of enthusiasm on the part of the national Governments for the strategy of IDDA. The view taken was that existing mechanisms of Ministries of Industry, Planning and Finance were adequate for the purpose and the creation of new organisms might have been counter-productive. This is a pragmatic view which needs to be respected in designing the modalities of implementing the second IDDA.

4. Other important findings

15. Of equal significance in the appraisal of the first IDDA and providing pointers to the second IDDA are the following:

(a) An area of great concern is the low utilization of capacity, low productivity and inadequate input-output ratios of existing industrial assets, pointing to rehabilitation as a key area for the second IDDA;

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(b) The poor performance of public sector enterprises with their heavy losses, inadequate business management, lack of autonomy, political and bureaucratic interference. This is a matter of considerable concern because of the dominating role so far played by State enterprises in a majority of African countries;

(c) Inadequate domestic savings, absence of capital markets and lack of an indigenous entrepreneurial class. In consequence, the domestic private sector has so far played a relatively minor role, particularly in the large-scale sector. It is however heartening to note the steady growth of a national small-scale sector and an entrepreneurially-oriented self-employed group;

(d) While there was a concentration of effort in the creation and expansion of capacity, this was not matched by the building of the required capability. Self-reliance demands the upgrading of African skills in the form of entrepreneurs, managers, high-level professionals, middle-level supervisors and skilled workers. Skilled manpower is also needed in maintenance, procurement, marketing and research and development;

(e) The physical infrastructure in the shape of transport and communications, roads, railways, ports, telephones and telecommunications remained very poor. This was a disincentive to industrial investment and foreign participation;

(f) The institutional infrastructure also left much to be desired. Schools, colleges, research institutions, banking and financial institutions, require strengthening. Government departments need to have an attitudinal change, from regulators of industry to promoters of industry;

(g) Regional cooperation is one of the cornerstones of IDDA and all African countries have strongly voiced their support for joint and cooperative action. While some successes have been achieved in the work of PTA, SADCC and ECOWAS, the setting up of joint industrial ventures and common markets remains an unrealized dream;

(h) Finally, there is the major issue of finance. The ambitious plans for industrial development in the first IDDA were not backed by adequate capital funding and were hence unrealizable. The second IDDA would need to be based on realistic estimations of available capital investment resources.

16. This brief survey of some of the weaknesses in the execution of the first IDDA, recorded by the evaluation team, was endorsed by the Council of African Ministers of Industry. The strategic approach to the second IDDA, while reaffirming the basic goals of the first IDDA, would need to address itself to these critical issues to ensure the success of IDDA II.

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III. PREPARATION OF NATIONAL PROGRAMMES FOR THE SECOND IDDA

17. The essence of the strategic approach to the designing of the second IDDA is the idea that each member country should be directly involved in its preparation. This building up from the grass roots was felt necessary for two reasons: (1) the programmes which would so emerge would be realistic and based on pragmatic considerations arising out of the environmental situation in each country; (2) this involvement in the preparation of the national programmes would ensure the full commitment of each country to the execution of the activities planned for the decade.

18. It was for these reasons that the ninth Conference of African Ministers of Industry invited all African countries to elaborate their national programmes for the second IDDA. To assist the member States in this task, the three secretariats of OAU, ECA and UNIDO issued a framework and guidelines.

19. The nature and intensity of the response of the member States is an indicator of their commitment to the second IDDA and their desire to promote industrialization in an orderly manner. Judged by this criterion, the second IDDA has certainly made an enthusiastic commencement.

20. With the recent inclusion of Namibia, there are 51 member States. As many as 47 have already completed the preparation of their national programmes for the second IDDA and have made them available to ECA and UNIDO. These countries include Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Togo, Tunisia, Uganda, United Republic of Tanzania, Zaire, Zambia and Zimbabwe.

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PART B. STRATEGIC APPROACHES

I. PATHWAYS TO DEVELOPMENT - A HISTORICAL PERSPECTIVE

21. At the commencement of the second IDDA, the member States have before them an enormous pool of ideas and experiences, empirical data and alternative strategic approaches. Above all, they can survey the realities of their own environments.

22. The methodological approach for preparing the programme for the second IDDA is fundamentally different from that of the first IDDA. There has been no attempt to propose an inflexible model of industrial development. The national programmes for the second IDDA have been prepared nationally. They are based on the hard bed rock of the environmental circumstances and realities of each member State. The aggregate of the 51 national programmes will constitute the heart of the second IDDA.

23. The historical perspective, which is outlined below, is provided only as a background against which the member States have designed their national programmes for the second IDDA. The policies and strategies underlying the second IDDA are derived from the national programmes.

24. In conceptualizing the approach to the second IDDA, four factors have to be taken into consideration:

1. Industrialization is a part of a wider exercise of promoting socio-economic development. It would be unrealistic to plan for industrial development in isolation. It is an integral part of the total development strategy.

2. In planning the second IDDA, we are not writing on a clean slate. There are almost three decades of developmental planning and an inheritance of past attempts to promote industrialization. The new decade commences with the legacies of the past and with a body of experiences and lessons learnt during the process of industrial growth.

3. The approach to development has not remained static and inflexible. While the basic goals of achieving self-reliance and self-sustainment have remained constant, the manner in which these desirable objectives can be attained has gone through a dynamic and evolutionary process. Over the years, a great deal of conceptual thinking has gone on, seeking to find the optimum model for Africa's development.

4. The industrialization of Africa will be affected by and must take note of global economic developments in particular the restructuring of Europe in 1992, the opening up of Eastern Europe, the entry of China into world markets and the rise of the Newly Industrialized Countries.

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25. Before embarking on the complex task of designing the second IDDA, it is imperative that an analytical examination be made of past experiences and the progression of developmental thinking.

1. THE COLONIAL LEGACY

26. Commencing in the early 1960s, all African countries became independent and emerged as sovereign countries, masters of their own destinies. While the colonial heritage varied from country to country, the pattern was remarkably similar. On the positive side, one must in fairness, record that colonial rule left behind:

- a basic structure of administration and law;
- a basic physical infrastructure of roads, railways and ports;
- a substantial mining industry (copper, diamonds and other ferrous and non-ferrous metals);
- a well-established plantation economy (tea, coffee, cocoa and other internationally marketable cash crops).

27. On the clearly negative side, are the following elements, which have plagued African development:

- Whatever development occurred was for the benefit of colonial settlers or for the "metropolitan" countries and the trickle-down benefits to Africans was negligible;
- Whatever physical infrastructure was developed was directed towards linking the colony to the "home land" and not to the inter-linking of Africa;
- There was an excessive preoccupation with promoting primary products for export, without attempting to achieve manufacturing value added in the colony;
- There was barely any semblance of industrialization, except perhaps in countries with large white settler communities, who enjoyed the benefits thereof;
- A total dependence was created on the import of capital, intermediate and consumer goods, making the continent vulnerable to the vagaries of commodity prices and consequent inability to pay for imports;
- Little attempt was made to develop an institutional infrastructure particularly educational institutions, research and development;
- Africans' skills and capabilities at entrepreneurial, managerial, professional and skilled worker levels remained undeveloped.

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28. A feature of the colonial heritage was the "balkanisation" of Africa and its fragmentation into artificial units of all shapes and sizes, which has destroyed the economic cohesion and viability of the continent.

29. While recording these adverse effects of colonial rule, it needs to be remembered that most African countries have now been independent masters of their own destinies, for almost three decades. There is need for introspection about whether progress has been made since then and if not, why not? Is it possible that part of the problem lies in adoption of unrealistic national policies, wrong priorities and inadequate national management?

2. THE LAGOS PLAN OF ACTION

30. During the 1960s and 1970s, many newly independent African countries embarked on programmes to diversify the export destination of their primary products, to encourage domestic processing of primary products and to launch a programme of import substitution. These approaches did not promote any appreciable results, because the efforts were piecemeal in nature and did not seek to transform the socio-economic and structural pattern of the economy.

31. In July 1978, the Monrovia Declaration was adopted by Heads of State and Governments of the OAU, pronouncing the goal of self-reliant and self-sustaining development. In April 1980, the Heads of State and Governments of the OAU adopted the historic Lagos Plan of Action, as an instrument for the implementation of the Monrovia Declaration. The Lagos Plan of Action was an integrated programme of development covering all sectors of the economy - food and agriculture, industry, natural resources, human resources, science and technology, transport and communications, trade, finance, energy and the environment.

32. The underlying spirit of the Lagos Plan of Action was the vision of African self-reliance and self-sustainment. A complementary document, the Final Act of Lagos, committed the member States to the concept of regional and subregional cooperation.

33. In the decade of the 1980s, member States incorporated the philosophy of industrialization enunciated by the Lagos Plan of Action in their national development plans. Programmes for self-reliant growth promotion of core industries, full integration of the people in industrial development, reduction of the gap between rural and urban development and regional and subregional cooperation were essential features of development strategy.

3. THE FIRST IDDA

34. The first IDDA (1981-1990) was a creation of the Lagos Plan of Action and an integral part of it. Its aim was to translate the Lagos Plan of Action goals into the arena of industrialization with the following objectives and strategic approaches:

(a) To use industrialization as a means of attaining self-reliance and self-sustainment;

(b) To reduce traditional dependence on forces and factors outside the continent;

(c) To promote internal engines of growth;

(d) To increase the use of domestic factor inputs;

(e) To promote the establishment in Africa of core and strategic industries;

(f) To develop critical national capabilities, human, institutional and infrastructural, for project design, project execution, negotiating skills, mobilization of financial resources, support services, entrepreneurship and business management;

(g) To promote regional and subregional cooperation as a practical means of enlarging markets, establishing multinational core projects and strengthening the interdependent physical and human infrastructure.

4. THE AFTERMATH - APPER AND UNPAAERD

35. The decade of the 1980s was disastrous for Africa. In terms of economic performance, the record is very disappointing. Per capita incomes have declined; agricultural output has not kept pace with population growth, leading to food deficits; the massive investments envisaged by IDDA have not materialized; and the industrial output of existing capital assets is discouragingly low. Africa today faces a heavy debt burden. In effect, the dependency factor has not been reduced, the industrialization of Africa has not become a reality and, to state the position in its stark reality, Africa today is poorer than it was at the commencement of the Decade in terms of per capita income.

36. The reasons for this disappointing performance are both endogeneous and exogenous. Among the internal factors were a very high population growth, natural disasters such as floods, famines and desertification, unstable political conditions, inadequate economic policies characterized by unbalanced development of urban and rural areas, low productivity and unsatisfactory returns on investments and an over-dominant position of the State in the development process, with inadequate involvement and motivation of entrepreneurial forces. Among the external factors are the world recessionary conditions; decline in the price of commodities; rise in costs of imported equipment and technology; and reduction of external aid in real terms.

37. This unsatisfactory record and the underlying reasons for it are well recognized by African leaders. To meet the crisis, two significant actions were taken midway through the Decade, which affected the course of IDDA:

(a) Adoption of the APPER declaration of African Heads of State and Government, which laid particular stress on agricultural development and debt reduction;

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(b) Adoption of UNPAAERD, which lent support to the APPER approach and highlighted the need for economic reforms.

5. STRUCTURAL ADJUSTMENT PROGRAMMES - THE INTERVENTION OF THE WORLD BANK/IMF IN AFRICA

38. A major development in recent years and one which will influence the course of the second IDDA, is the adoption by a large number of African countries of Structural Adjustment Programmes (SAP) linked to the grant of Structural Adjustment loans provided by the World Bank and foreign currency facilities provided by the IMF. Of the 51 member States as many as 35 are presently under these arrangements. Recourse to the assistance of the World Bank and IMF was found to be imperative because of the economic crisis which the majority of the African countries faced and as a matter of sheer survival.

39. The acceptance of World Bank/IMF assistance is predicated on the acceptance by the recipient country of a set of policies, which IBRD/IMF feel would provide a realistic basis for growth and development. The package of policy approaches include:

(1) The belief that the market is a more efficient mechanism for promoting optimum resource allocation than state planning and "dirigisme";

(2) The adoption of realistic exchange rates which reflect the true value of the country's currency and which will promote exports and not place a premium on imports;

(3) Positive interest rates, higher than the rate of inflation, which will encourage savings;

(4) Trade liberalization and removal of bureaucratic constraints;

(5) Avoidance of large budgetary deficits;

(6) Avoidance of subsidies;

(7) Encouragement of private entrepreneurship, "privatization" and a lessening of the role of parastatals.

40. Prima facie, it would seem that the development strategy proposed by the World Bank and that adopted by the Lagos Plan of Action and the first IDDA were not entirely on the same wavelength. The Bank's approach was essentially private sector and market-oriented. The Lagos Plan of Action and the first IDDA were not based on "Laissez-faire". They proposed the achievement of self-reliance and self-sustainment through activist state action, through organized and conscious state planning, through a state guided role of public sector as an instrument of development.

6. AFRICAN ALTERNATIVE FRAMEWORK (AAF-SAP)

41. AAF-SAP recommends that the critical focus of the region's development should be on the transformation of Africa's present primarily exchange economies into predominantly production economies; the greater and more effective involvement of all socio-economic institutional groups in the development process through efficient allocation of resources; and the production and accessibility of the people to essential commodities and services. In this respect, AAF-SAP makes a critical link with the productive sectors particularly agriculture and industry.

42. There are four major implications of both the framework and the overall policy instruments as well as the human-centredness of AAF-SAP on the industrial sector. First, the strengthening and diversification of the production sector require that African economies should be transformed from the present predominance of raw material production for export to industrial economies producing a variety of manufactured goods for both local use and export. Secondly, there must be drastic changes in the pattern of investments such that resources are shifted from commercial and speculative activities to the public and private industrial sector for both large and small-scale industries. Thirdly, the satisfaction of domestic demand from the majority of the population, especially in the rural agricultural sector. Fourthly, AAF-SAP requires the creation of a broad-based structure of research and the building up of a critical mass of scientific and technological manpower.

43. The implication of such an approach calls for a total commitment to industrialization by the political leadership and decision makers in Africa to ensure that Africa will set up industries that produce basic commodities such as iron and steel, fertilizers, capital goods and essential consumer goods like food, cloth, agricultural implements, semi-durable goods, household items. These include, in the long run, heavy industries that are indispensable for building up the technological and industrial base necessary for ensuring a sustained rate of industrialization. They also include, in the short and medium-run, small-scale industries that are required to achieve the twin objectives of increasing employment and adequate supply of consumer goods.

44. It should be fully recognized for the establishment of both heavy industries and technological infrastructures, African governments, taken individually, may not have the necessary capability. Indeed, a major thrust of the programme for the second Industrial Development Decade for Africa should be the promotion of multinational or subregional enterprises in chemical, metallurgical, engineering, agro- and forest-based, and building material industries. Thus, subregional integrated programmes including specific projects should be agreed upon in all subregions. Similarly, regional scientific and technological institutions that were set up to promote the development of research and technological manpower should be strengthened.

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7. THE WORLD BANK'S LONG-TERM PERSPECTIVE STUDY

45. At the same time as the Conference of Ministers of Industry had set up a mid-term evaluation team to assess the success or otherwise of the first IDDA, the World Bank appointed a high-level team to examine the success or otherwise of Structural Adjustment Programmes and to examine the possibility of alternative development approaches.

46. The findings and recommendations of the World Bank team have been published in a Long-Term Perspective Study entitled "Sub-Saharan Africa - From Crisis to Sustainable Growth". Among the important conclusions which impact on IDDA and presumably will influence World Bank approaches to African development are:

1. While the highest priority must be given to agriculture and food security, this should under no circumstances stop African industrial development. Thus while proposing a 4 per cent annual growth in agricultural output, it is suggested that industrial output should rise at a much larger rate.

2. Growth by itself will not alleviate poverty or provide food security. Income distribution and poverty alleviation programmes have to be part of a long-term strategy of equitable growth.

3. The adoption of a realistic set of public policies by itself is not enough. There is a need to promote African entrepreneurship to capitalize on the open business environment. These are by no means limited to the artisanal level but can be sophisticated and high-technology levels.

4. A high concentration should be devoted to improving the productivity of existing capital assets, to make them generate surpluses. They should be assets not liabilities.

5. The key lies in the creation of "an enabling environment" for higher productivity - with the following parameters:

    - capability building at the national, political, civil service, planning and information levels;

    - capability for effective economic management;

    - incentive systems;

    - development of the physical infrastructure;

    - science and technology infrastructure;

    - handling the external environment (trade and aid).

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8. THE MID-TERM EVALUATION TEAM'S RECOMMENDATIONS FOR THE PROGRAMME OF THE SECOND IDDA

47. While making its evaluation of the results of the first IDDA, the Independent Group of Experts took into consideration not only the empirical evidence of what had actually transpired in, but also the changing patterns of, strategic approaches to industrialization which emerged during the decade of the eighties, which have been earlier summarized.

48. The findings of the Mid-Term Evaluation Team have been outlined in Part I of this document. The Team's recommendation was that the design of the second IDDA should be modest, realistic, manageable and attainable, so that by the turn of the century, some positive advance could be achieved. They proposed a twelve point action programme covering the following areas:

1. Rehabilitation of existing enterprises;
2. Revitalization of public sector enterprises;
3. Preventive maintenance and spare parts;
4. Development of agro-industrial linkages;
5. Entrepreneurship development;
6. Market orientation;
7. Attracting foreign investment;
8. Development of the physical infrastructure;
9. Development of institutional infrastructure;
10. Strengthening of the banking sector;
11. Regional and subregional cooperation;
12. Human resource development.

49. The Team emphasized that "the underlying thread is the building up of human and institutional capabilities and of material resources. It is only on this vital base that Africa can reduce its external dependency and create the much desired internal engines of growth".

II. THE STRATEGIC APPROACH TO THE SECOND IDDA AS REFLECTED IN THE NATIONAL PROGRAMMES - NEW ORIENTATIONS

50. The basic goals of the second IDDA are not fundamentally different from those adopted for the first decade. They spring from the concepts of the Lagos Plan of Action. The vision continues to be that of a programme to end

the over-dependency which African countries have on the industrialized world, to promote internal engines of growth, to build on Africa's wealth and natural resources and progressively to achieve self-reliance and self-sustainment.

51. There has however been a major departure in the "modus operandi" of preparing the programme for the second IDDA. The first IDDA was conceptualized and articulated at a centralized level. A lead role was played by OAU, ECA and UNIDO in drafting the programme for the first IDDA and the Conference of African Ministers of Industry in endorsing it. The member States were at the receiving end of strategies, priorities and programmes prepared at these centralized levels. They played no direct or participatory role in the process.

52. Preparations of the programme for the second IDDA have moved to the national level. Each member State has undertaken the task of framing a national programme for the second IDDA using the services of local experts. This has ensured a sense of pragmatism. The programmes are designed keeping in mind the realities, environmental circumstances, natural resources and priorities of each member State.

53. The national programmes on the basis of which this document has been prepared have all reiterated the LPA objectives. In most of the national development plans, these goals have been explicitly articulated. There is, however, a perceptible change in the strategic approach to achieve these goals which clearly emerges from a perusal of the national programmes. This is largely due to the experiences of the first decade, the changing world environment and the adoption by a large number of African countries of World Bank sponsored Structural Adjustment Programmes.

54. Among the important components of this modified strategic approach, the following are the most significant:

1. Optimizing interlinkage between industry and agriculture

55. The second IDDA recognizes that it is a grave fallacy to view agriculture and industry as competing sectors, one growing at the expense of the other. In reality, the fortunes of the two sectors are intimately interlinked thus:

- The efficiency of agriculture depends greatly on industrial methods of storage, processing and preservation of crops;

- Agricultural outputs are critical inputs for industry (textiles, food processing, edible oils etc);

- Industrial outputs serve as inputs to agriculture (implements, tractors, fertilizers and pesticides);

- A prosperous agricultural community generates surplus incomes and thus widens the effective demand for consumer and intermediate goods produced by industry;

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- Exported agricultural surpluses bring in foreign exchange earnings, badly needed for import of components, spares and industrial raw materials.

56. The national programmes have incorporated wide-ranging schemes to promote agro-industrial linkage and to develop agro-based and food-processing industries.

2. Concern at the poor performance of existing industrial investment plans for rehabilitation, and need to improve public enterprise performance

57. During the first IDDA and in earlier years, investments were made in industrial projects, although funding and other constraints did not permit investments of the desired scale. Well-intentioned as these investments were, they did not pay off. Massive problems have arisen in technology absorption, machinery maintenance and management. The net result has been that input-output ratios are sub-optimal, consumption coefficients are below standard, productivity is low and capacity utilization is below break-even point. It is roughly assessed that the average capacity utilization of African industries ranges between 30 to 40 per cent. In consequence, many of the industries set up are running at a loss and some are at point of bankruptcy. Because a great number of these plants are in the public sector, they have been kept going through State subsidies and have thus become a burden to national exchequers.

58. All the national programmes have voiced their concern at this situation and have therefore placed the highest emphasis on rehabilitation and reconstruction of existing assets. It is recognized that industrial output can be doubled on the basis of existing assets with marginal investments in de-bottlenecking. One lesson has clearly been learnt namely that all further investments must be preceded by carefully prepared and considered feasibility studies.

59. The earlier investments in Africa have been mainly in the public sector. In a way this strategy was inevitable in the absence of capital markets and an organized domestic prime sector. Further, the massive funds involved called for public investment. Unfortunately, African public enterprises have not lived up to expectations. Apart from problems relating to underutilization of capacity and low productivity earlier noted, the public enterprises have lacked business management skills and attitudes. They have become flabby and overstaffed, bureaucratic in their procedures and dominated in their functioning by politicians and government officials. There is a great deal of ambiguity on the question of corporate goals - financial objectives versus social objectives. Unhappily a large proportion of public enterprises are today running at a loss.

60. The national programmes have unhesitatingly noted this dismal picture and a major plank of the programmes is the reconstruction of public enterprises. There is a demand for better performance and for returns on public

investments. The programmes recognize the need to strengthen public management, clarify goals and grant adequate autonomy to the enterprises. While recent trends point to a halting of the expansion of the public sector in industry, it is clear that they will still continue to play a vital role during the second IDDA and hence their performance will in large measure determine the success of the decade.

3. Strengthening the African entrepreneurship base

61. At the commencement of the second IDDA, one trend is clearly noticeable, namely a policy direction in favour of liberalization, opening up of oversheltered economies, lessening of State controls, licensing and regulatory restrictions and encouragement to the growth of an African entrepreneurial community.

62. The success of the second IDDA will depend, to a very great extent, on Africa's ability to widen and strengthen its national entrepreneurial and managerial base.

4. The importance of the informal and small-scale sectors

63. Fortunately, there does exist in Africa a remarkably vibrant base on which it will be possible to build this projected entrepreneurial community, namely the informal and small-scale sectors. A study of the recent economic history of many African countries which have gone through periods of internal turmoil shows that it is the informal and small entrepreneurs that have kept the economies going. As things stand today, the bulk of their activity is in the nature of trading. But, in the process, business skills and cost-effective management of men, materials and money have been developed. What is needed is to transfer these skills to the industrial sector.

64. From experience, it is found that investment in small enterprises is less heavy in relation to installed capacity and creates relatively higher job opportunities which makes them attractive in the context of growing unemployment in African countries. The development of small enterprises is more flexible than the creation of giant enterprises which have enormous implications on national economies. Furthermore, small enterprises are excellent vehicles for transfer of technology and promotion and managerial skills.

65. Most of the national programmes have recognized this asset and have proposed measures for strengthening and developing the small and medium sectors of industry. What is contemplated is a progressive process of graduation to larger scales of industrial activity.

66. In this context, the second IDDA recognizes that industrialization is not necessarily equated only with huge investments and the creation of giant industries. In many advanced industrialized countries, small and medium industries are playing a very significant role, complementary to large-scale industry or even competitive to it. If by the year 2000 a well organized and

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efficient base of small and medium industries springs up in Africa, it will provide the real take-off point for African industrialization in the twenty-first century.

5. A new emphasis on market orientation

67. The first IDDA laid strong emphasis on the need for industrial investment, the growth of manufacturing value added and the utilization of domestic factor inputs. While the second IDDA will continue to stress these aims, which continue to be valid, a consciousness has grown about the necessity of developing marketing strategies for industrial outputs and the need for cost-effectiveness, international competitiveness, quality control and consumer service. While it is recognized that over-protection in import-substitution industries has tended to breed inefficiencies, the complete withdrawal of protection to infant industries might destroy Africa's efforts to industrialize. To the extent to which industrial production is intended for export, it must necessarily meet exacting international standards and must be strong enough to face international competition in terms of quality, price, delivery and after-sales service. As a first step in this direction, the second IDDA will endeavour to promote intra-African trade and to build up regional and subregional common markets.

6. Stimulating an industrial culture

68. On the basis of past experience, African planners and policy makers have been asking themselves the questions "What is the key to industrialization? What is it that has created successful industrial societies?"

69. The simplistic answer that industrialization will be achieved through acquisition of technology, investments in plant, equipment and machinery and by aiming to enhance industrial output, has not been found satisfactory.

70. A number of other ingredients are needed to stimulate the process of industrialization such as:

- prudent selection of investments based on carefully prepared feasibility studies and project reports;
- accurate cost estimations;
- operating plants at optimum capacity;
- high levels of productivity;
- planned systems of preventive maintenance;
- periodical upgrading of technological processes;
- marketing strategies and market orientation;

- generation of surpluses;
- cost-effectiveness and international competitiveness;
- generation of entrepreneurial, managerial and technical skills.

71. The entire package results in the creation of an industrial culture, which tends to be self-perpetuating. No better example can there be of the Lagos Plan of Action's call for self-reliance and self-sustainment.

7. Promoting regional and subregional cooperation

72. The concept of regional and subregional cooperation was an integral element of the Lagos Plan of Action and the first IDDA. Considerable progress has already been made in setting up regional organizations and institutions, promoting intra-African trade and stimulating cooperative efforts in building and linking the physical infrastructure. However, the establishment of joint ventures of African countries to set up industrial projects has not so far met with adequate response.

73. A major thrust of the second IDDA will be the promotion of such African multinational enterprises along with cooperation in support services such as technology and informative services. This component of the second IDDA will be dealt with comprehensively in Part II of this document.

8. Environmental considerations

74. While industrialization is an imperative for Africa's economic development, it is necessary while implementing the second IDDA that there should be an awareness of the dangers to the environment arising out of haphazard and unplanned industrial expansion. Chemical and metallurgical industries are generators of industrial pollution. Forest-based industries could create deforestation and soil erosion. Food-processing industries have to take great care about the levels of toxicity in food-processing chemicals. Fisheries can be adversely affected by the discharge of effluents into river waters.

75. The traditional pattern of industrial development is not sustainable over a long period because it threatens the basic conditions of life support on Earth by placing at risk the ozone layer, the global climate and the key cycles of nature. Industry is a major cause of the present disequilibria in the biosphere. In the past, the industries of developed countries were the main contributors to these problems but developing countries will become increasingly involved as they continue to industrialize. If present trends continue, the share of global air pollutants and toxic chemicals emitted by developing countries will increase significantly. In fact, it has been pointed out that developing countries tend to attract highly pollution-intensive industries and that the diffusion of cleaner production

processes and technologies, the most cost-effective way to abate pollution, is not occurring at a sufficient scale across industries and countries. This tendency, if unchecked, will hinder opportunities for sustainable development.

76. To avoid further risks to the biosphere and to the sustainability of the industrial development process, the world needs new patterns of industrialization. These new patterns of industrialization, termed ecologically sustainable industrial development (ESID), must enhance the contribution of industry to economic and social benefits for current and future generations without impairing basic ecological processes. They would be characterized by limitations on industrial activities to protect the biosphere, the efficient use of man-made and natural capital and, in the social sphere, equity as the basic principle in the transition to a sustainable society.

77. The national programmes do make references to the question of environmental protection. Of specific concern is the degradation of forests and the pollution of African rivers.

78. Environmental protection measures would include:

- framing of appropriate environmental legislation;
- prescription of toxicity and pollutant levels;
- strict enforcement of environmental regulations;
- scrutiny of project reports with reference to anti-pollution measures;
- decentralization of industries to avoid overcrowding of metropolitan areas.

79. The second IDDA will seek:

(a) To enhance awareness in African countries of industry-related environmental problems and encourage the formulation of industrial policies and strategies related to the environment;

(b) To ensure the prevention of environmental and resource degradation through the adoption of cleaner technologies, enhanced energy efficiency in industry and the recycling and utilization of industrial wastes;

(c) To integrate the adverse impact of existing industry through effective pollution control;

(d) To continue to improve mutually beneficial intercountry and inter-agency cooperation in the areas of policy formulation, adoption of cleaner technologies and the control of industrial pollution through such measures as utilizing institutional and industrial capacities in both developed and developing countries for the solution of environmental problems.

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III. IMPORTANT PUBLIC POLICIES

1. National planning

80. One message comes clearly through, on a perusal of the documents underlying the Lagos Plan of Action and the first and second IDDA, namely that the industrial development of Africa cannot be left to chance. It can come about only through a conscious effort of each member State. Implicitly, this points to the need for national developmental planning. National plans would necessarily have to harmonize with Structural Adjustment Plans in countries which have adopted SAPs, but the national plans provide a long-term development perspective, within which short-term programmes would need to fit.

81. Despite differences in political and economic environments in the African countries, there is a strong communality in the definition of national goals. They include, *inter alia*:

- elimination of poverty;
- raising GDP and per capita income;
- employment generation;
- agricultural development and food security;
- full utilization of domestic national resources;
- human resource development;
- advancement of rural areas;
- export promotion;
- stabilization of the balance of payments and reduction of the debt burden.

82. Industrialization is perceived as one of the main instruments in achieving the stated national goals. Some of the national plans have specified the nature of the country's industrial objectives such as:

- to rehabilitate existing industries, especially those producing essential goods for local consumption, so that they can produce at near full capacity;
- to create self-sufficiency in basic consumer goods;
- to restructure the industrial sector to promote goals of an independent, integrated and self-sustaining national economy, with forward and backward linkages between sectors, especially between agriculture and industries;

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- to harness indigenous scientific capability intended to adopt appropriate technology, with full involvement of artisans, technicians and professionals;

- to lay the foundation of new industries on the basis of resources and utilization of local raw materials;

- to encourage the growth of a healthy private sector and free enterprise business by creating a favourable environment;

- to diversify the economy through accelerated growth in manufacturing and trade;

- to stimulate export activities and encourage increased processing and value added in import-substitution industries;

- to provide more productive job opportunities to citizens, particularly in the rural areas;

- to encourage and support opportunities for citizens in the management and ownership of business;

- to protect the interests of consumers and workers.

83. Most of the national plans have a time-frame ranging from three to five years. In many cases, because of crisis situations, the plans in effect became annual plans. The second IDDA has a wider time horizon of 10 years. With the adoption of the national programmes for the second IDDA, the three or five years Developmental Plans which will cover the period of the nineties will incorporate the project proposals contained in the national programmes and will allocate resources appropriately.

2. Creating an enabling environment

84. There is increasing recognition in Africa that the pace of industrialization is, in large measure, dependent on the existence or creation of what is currently described as an "enabling environment", an atmosphere which is conducive to investment, sensitive to the difficulties facing industrial managements and problem solving in character. Partly such an enabling environment comes into place with an efficient physical infrastructure and a supportive institutional infrastructure. The creation of these back-up infrastructures is a key programme area in the second IDDA.

85. But this is not enough. In between the adoption of industrialization goals, the industrial investments and the productive management of industry, there lies an area of national management which has a determining influence, namely the formulation and implementation of public policies which have a positive impact on industrialization. It is these policies which really create the enabling environment.

86. Since these policies are formulated at national levels, Governments undoubtedly are major actors in the drama of industrial development. The evolution of an appropriate industrial policy framework is consequently a matter of major concern in the second IDDA. This framework would need to address itself to a series of issues such as:

- The approach to national planning;
- The articulation of policy goals;
- The degree of State intervention of a regulatory nature (licensing regulations);
- The degree of State intervention of an investment character (the extent of the role of the public sector);
- Policies relating to taxation;
- Import-export policies and regulation relating to the allocation of foreign exchange;
- Pricing and subsidization policies;
- Attitudes towards the private sector;
- Attitudes towards the foreign investment (nature of investment codes).

87. There is very little need to elaborate on the influence which this set of policies has on healthy industrial growth. African planners and investors have experiences of their own countries of the impact which these policies have. A survey of the national programmes brings out the consciousness which the member States have of this matter. A great deal of time and effort has gone into making "an agonizing appraisal" of the past. Based on this, each country has attempted to draw out a policy approach for the second IDDA period.

88. While it is clear that the package of public policies influencing industrial development will vary from country to country, an analysis of the national programmes reveals a remarkable consensus in approach.

89. While all the member States have continued the practice of preparing national development plans, there has been a major attitudinal change in approach. The National Plans are no longer perceived as highly centralized and rigid allocation of national resources and comprehensive masterminding of the national economy. They are perceived as providing a framework and a set of objectives and are indicative in character.

90. There is a strong move towards market orientation and the promotion of competitive forces. There is a clear trend towards opening up and liberalization of the economies and the promotion of African

entrepreneurship. Parallelly there is a trend towards reducing the investments and further expansion of the public sector in industry.

3. Implementing public policies

91. Three points need to be stressed at this stage.

92. First, it is not good policy to institute a set of policies which will remain unchanged throughout the second IDDA period. While stability of public policy is an important consideration to investors, rigidities can be counter-productive. During a period of 10 years circumstances, both domestic and international, may undergo changes. A set of policies conceived on the basis of today's scenario should have the necessary flexibility to adapt to changing circumstances. The policy framework therefore needs in-built monitoring and early warning signals.

93. Second, the effectiveness of public policies depends as much on how well they are conceived as how well they are implemented. Simple as this proposition may sound, past experience has shown that there is a great scope for improvement of the machinery of Government and public agencies. There is need for an attitudinal change from one of regulation to one of promotion. Bureaucratic rigidities might defeat the spirit of the second IDDA. This points to the urgent need to review the functioning of existing institutions and to promote an industrially oriented training programme for public officials.

94. Third, governments are so organized that policies are in practice formulated by different ministries and agencies. There is a hidden danger of working at cross purposes. The promotion of teamwork and coordination is an essential element. The second IDDA is conceived as a network of interrelated and interdependent policies and activities aimed at advancing industrialization. Task forces and interdisciplinary working groups need to be actively and continuously engaged.

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PART C. AN ACTION-ORIENTED PROGRAMME FOR THE SECOND IDDA

I. CONSOLIDATION PROGRAMMES

I.1. REHABILITATION AND REGENERATION OF EXISTING INDUSTRIES

1. The nature of the problem

95. An area of fundamental concern and one which constitutes a major plank in the second IDDA is the question of rehabilitation of existing industrial investments. It must be frankly recorded that in this respect the record of Africa has been appallingly poor. Industries which were set up during the first IDDA and even earlier are languishing and have shown a dismal performance in terms of capacity utilization, productivity, input-output ratios, consumption coefficients, cost-effectiveness and profitability.

96. Feasibility studies and project reports, which should normally precede industrial investments, assume certain break-even points based on an anticipated and attainable utilization of installed capacity. Underutilization of capacity, for whatever reasons, destroys the viability of these investments. The average level of capacity utilization of industries in African countries varies between 30 per cent to 40 per cent. There is even the extreme case of the integrated steel plant operating at 2 per cent of capacity, a virtual closure. That the problem of underutilization of capacity is a curable one has been admirably demonstrated in some countries where average capacity utilization has now been brought up to the highly satisfactory level of 70 per cent.

97. In almost all the countries which have prepared their national programmes for the second IDDA there is an unhesitating recognition that past industrial investments have not performed well. Equally there is an explicit recognition that, before going in for further large-scale industrial investments, the first priority must be rehabilitation, modernization and revitalization of existing industries.

98. This critical situation was also recognized in APPER which set among the new priorities for the development of the industrial sector: the rehabilitation and rationalization of existing enterprises; maintenance and production of parts; and the building up of managerial and entrepreneurial capabilities.

99. The Conference of African Ministers of Industry at its ninth meeting emphasized the need to rehabilitate selected key industrial plants in African countries, within the context of an appropriate macroeconomic and industrial policy framework, as an initial step towards industrial regeneration.

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2. Remedial measures

(a) Diagnostic studies

100. The key to this programme lies in the undertaking of diagnostic surveys of ailing industries, to ascertain the real causes of underutilization, on the basis of which meaningful rehabilitation measures can be adopted and appropriate resources allocated for the purpose.

101. It is heartening to note that such diagnostic surveys have been commenced in most of the African countries. As recorded in the national programmes and in other surveys of ailing industries in the continent, the following emerge as the major causes of underutilization of capacity and low productivity:

1. Wrong investment decisions

102. In these very unfortunate cases, the cause of the trouble was at the very inception of the project. Investments made without feasibility studies or project reports or on the basis of faulty and untested assumptions in regard to technical feasibility, availability of raw materials and ability to market the products, were doomed to failure. A clear lesson has to be drawn for future investments. Whether these past investments can be salvaged or not would have to be examined on a case-by-case basis and if necessary a courageous decision may need to be taken to wind up the project.

2. Unworkable technology

103. Some projects have failed because of the adoption of new technologies which have not been proven. It is sad to note that in some cases, Africa has been used as an experimental laboratory. African investors need also to appreciate that technologies which work in the conditions available in the industrialized world may not be suitable for the existing conditions in Africa.

3. Downtime due to breakdowns of machinery and equipment

104. This is one of the commonest causes of low utilization and is primarily due to absence of planned systems of preventive maintenance and non-availability of spare parts. In turn the problem is exacerbated by the chronic shortage of foreign exchange for the import of components and spares. This is a fruitful area for regeneration programmes.

4. Low capacity due to lack of adequate raw materials and other inputs

105. If industrial investments are planned on the basis of the IDDA principle, namely the use of domestic factor inputs, this problem should not normally arise. However, if the industry concerned is dependent on imported raw material, the problem is similar to that of spare parts.

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5. Inadequate supply of energy

106. Industries depend upon a steady supply of power and its regular availability is a major factor making an investment. Breakdowns in power supply, power cuts and fluctuations in voltage have obviously adverse effects on production.

6. Downtime due to industrial conflict

107. This is a growing problem in Africa. Industrial production can be very badly affected by labour problems - strikes and go-slow on the part of the workers or lock-outs by management. Absenteeism is also rampant particularly where workers are simultaneously agriculturists.

7. Inability to market the products

108. Even in cases where projects are technically sound and where no constraints regarding inputs arise, the major question is whether the production at full capacity can be marketed. It would be normal to assume that estimations of market demand are made before the investment funds are put down. But this is not always so. In many countries there is over-capacity in some industrial sectors, or alternatively domestic industry faces competition from imports and cannot match quality and price. The capability to export is also determined by cost-effectiveness and competitiveness. It is in this context that regional markets assume particular significance.

109. A detailed analysis of capacity underutilization in African countries and a comprehensive identification of problem areas is contained in ECA's "Technical Publication on Measures Required for Removing Present Sector in African Countries" (ECA/IND/POL/008/88, May 1989).

(b) An integrated approach to rehabilitation

110. It will be noted that the problems resulting in underutilization of capacity are both internal and external, some within the competence and control of plant managers and some beyond their control. In this context, UNIDO's integrated approach to regeneration of African industry (CAMI.9/4, TCE/1989/4 dated 20 March 1989) is most relevant. The paper rightly points out that rehabilitation has been traditionally viewed rather narrowly as a plant level problem. The concept of industrial rehabilitation needs to combine an understanding of both macroeconomic forces and actual problems at the plant level. Manufacturing enterprises should be studied in relation to their economic environment. Diagnostic analysis should cover the entire range of technical, managerial and technology issues at the plant level as well as the overall financial, commercial and structural issues at the sectoral and macroeconomic levels. A three-pronged approach is proposed:

(a) To identify suitable enterprises where scarce foreign exchange and other investable resources will be most efficiently used to upgrade production and company performance;

(b) To combine plant rehabilitation with a restructuring programme of the industrial sector as a whole to ensure growth, economic integration and provision of support services;

(c) To adjust public policies and the administration to better support the rehabilitation process.

111. Viewed thus, rehabilitation has technical, technological, organizational and managerial implications along with economic, financial, marketing, design and engineering dimensions.

112. One important aspect of the regeneration process is the need to seek cost-effectiveness and to promote competitiveness. The situation in many African countries of monopolies, over-protection from foreign competition and over-regulation have tended to make industries flabby and complacent. The breaking-up of monopolies, creation of domestic competitive positions, liberalizing import and promotion of export-oriented industries will themselves provide economic spurs to rehabilitation.

(c) Rehabilitation schemes included in the national programmes

113. In almost all African countries, the problem of underutilization of capacity, low productivity and generally poor performance of existing industrial assets has been experienced. In consequence, the national programmes, almost without exception, have accorded the highest priority to schemes of consolidation and rehabilitation. Most of the countries have completed the diagnostic task of identifying the causes for weak performance.

114. A survey of the national programmes reveals that the main causes of industrial sickness are (i) obsolescence of plant and equipment; (ii) inadequate availability of raw materials in time; (iii) shortage of spare parts; (iv) inadequacy of skilled manpower; (v) inadequate arrangements for providing finance for working capital and purchase of equipment and technology.

115. On the basis of the diagnostic studies, each of the member States has launched action oriented programmes to remedy the situation. Among the measures already initiated or proposed to be taken are:

- special credits for ailing industries;
- special allocations of foreign exchange for import of raw materials, spare parts and balancing equipment;
- adoption of the UNIDO integrated approach to rehabilitation;
- introduction of preventive maintenance systems;
- adoption of appropriate macroeconomic policies in the areas of pricing, interest rates, exchange rates, taxation, wages and incentives, aimed at creating the right environment for regeneration.

(d) Impact of rehabilitation programmes

116. Rehabilitation and reconstruction are a central theme in the second IDDA. The high priority given to this question in the national programmes is in line with the views expressed by the Conference of African Ministers of Industry. It is based on a realistic appreciation of the current industrial profile in Africa and a determination to upgrade the performance of Africa's existing industrial assets.

117. While the full economic impact of the programme would no doubt depend upon effectiveness of the implementation of rehabilitation plans, a rough calculation of the enormous benefits during the Decade can be attempted. The manufacturing value added of sub-Saharan African countries in 1986 was estimated to be US$ 16,228 million. On the basis that this MVA was generated by capacity utilization of an average of between 30 to 40 per cent and on the assumption that by the end of the Decade, a 70 per cent utilization is achieved, the MVA can well-nigh be doubled to US$ 32,000 million at constant prices. This significant production can be achieved with marginal investments in de-bottlenecking, replacement of obsolete machinery and improved process. The essence of the effort will lie in improved management practices backed by supportive macroeconomic policies.

I.2. IMPROVING THE PERFORMANCE OF PUBLIC SECTOR ENTERPRISES

(a) Nature of the problem

118. State-owned enterprises generally described as public enterprises, play a dominant role in the African economic scenario. The State has emerged as a promoter, investor and entrepreneur and indeed a very substantial proportion of African industry is State-owned.

119. State enterprises have been created either by takeover of assets of departing foreigners or by conscious nationalization of private industry or by direct State entrepreneurship. The bulk of cases are in the last category. Public enterprises have been set up in some cases for ideological reasons. But in the majority of African countries, the growth of public enterprises was inevitable because of the absence of an organized indigenous private sector. The private sector, such as it was, largely consisted of transnational corporations or expatriate mainly Asian interests. The domestic private sector was restricted to the informal sector or at best small-scale industry. There was, and in most cases, continues to be an absence of stock markets, adequate credit mechanisms and surplus domestic savings which are the base of private sector growth.

120. Unfortunately, public enterprises have not performed adequately. Apart from the problems of low productivity and underutilized capacity, which have been examined in the previous section, African public sector enterprises have other structural problems:

- Management skills have been inadequate;

- Appointments to top positions are often made for political and other reasons and not on the basis of professional merit and capability;

- Enterprises are not given adequate autonomy to function as business units;

- There is excessive interference in decision-making, policy formulation, contracts, appointments, etc. by politicians and bureaucrats;

- The Government often imposes obligations on the enterprises, for reasons of social welfare, which undermine the financial viability of the operations;

- The goals of public enterprises are not always adequately articulated creating a dichotomous situation between the attainment of commercial versus social objectives.

121. The net result has been disastrous for Africa. A large percentage of public enterprises are losing concerns and their losses have to be covered by the public exchequer. Thus, far from supporting development, public enterprises are often a burden on the economy.

(b) Remedial measures

122. There is really no reason why public enterprises should not perform better. Africa itself has many examples of well-run and profit-making public enterprises.

123. The following are some of the measures which the member States should take to revitalize their State-owned enterprises. Indeed, the national programmes indicate that most of these measures are being put into action:

One - the question of rehabilitation and regeneration of existing industries dealt within Programme. Applies with equal force to public enterprises. Indeed, since public enterprises are generally involved in critical sectors of industry, the need to promote higher productivity and better utilization of capacity is even more urgent in the public sector.

Two - a system of performance evaluation needs to be introduced, linked directly to the objectives given to the enterprise.

Three - intensive training is required for building up the necessary management skills in the public enterprises covering all disciplines - production, materials management, marketing, cost control, quality control, finance and accounting and corporate planning.

Four - it would be desirable to introduce a system of contracts between the enterprises and Government as part of the autonomy - accountability framework.

Five - where social objectives are imposed on public enterprises and where the implementation of such social objectives adversely affects the commercial viability of the enterprises, clear accounting methods should be devised to identify the additional costs involved. Such costs should be a charge on the public exchequer.

Six - pricing policies of public enterprises should be reviewed to prevent losses due to pricing below cost.

Seven - the relationship between the Government and the enterprise management needs more precise definition. Undue interference by politicians and civil servants in the day-to-day management of public enterprises could be counterproductive. Subject to the Government's prerogatives to define the enterprises' objectives, to adjudicate performance and to ensure that enterprises are functioning in line with national policies, the enterprise managements should be granted adequate autonomy to run the business.

Eight - a critical factor is the modality of making top appointments. The success of the enterprise lies in entrusting it to the right hands, to persons of high management capability, business experience and integrity.

(c) Plans for improving public enterprise performance in the national programmes

124. A running thread through the national programmes is the concern voiced about the poor performance of public enterprises and the need to take action to remedy the situation. Many of the member States, particularly those who have adopted Structural Adjustment Programmes, have gone in for a policy of privatization as a solution. In practice however, this has not been found easy precisely for the reason why the public enterprises came into existence, namely the absence of an organized private sector to take over. Another dilemma facing policy makers is that privatization becomes attractive to prospective investors only in cases where public enterprises are doing well and are making profits, whereas there are no takers for the loss-making enterprises.

125. It would therefore seem, and this is confirmed by the national programmes, that during the second IDDA, public enterprises will continue to play a major part. What needs to be done is to ensure that the right environmental conditions are created for upgrading their performance levels. The national programmes contain specific action plans in this regard.

126. The action plans of member States for upgrading public enterprises performance include:

- establishment of special cells to conduct diagnostic studies, propose remedial measures and monitor performance;
- introduction of measures to speed up privatization, wherever feasible;

- promotion of vertical and horizontal integration;
- capital and debt restructuring;
- reduction of subsidies and special protections;
- strengthening of human resources and improvement of management capabilities;
- preparation of long-term corporate plans;
- introduction of a competitive environment;
- grant of greater autonomy to enterprises and counterpart insistence on improved business performance.

(d) Impact of measures to upgrade public enterprise performance

127. To the extent that the performance improvement measures step up productivity and capacity utilization in the public enterprise, it will result in greater industrial production and increased MVA at minimal investment cost. Well run public enterprises will be more feasible candidates for privatization, if it is still desired to privatize them after they have turned the corner. To the extent that the public enterprise cut losses, become self-supporting and become profitable business concerns, the heavy drain on African public treasuries will be progressively eliminated or at least substantially reduced. This will release much needed funds for deployment into fresh industrial investments and strengthening of support services.

I.3. THE COMPLEMENTARY ROLE OF THE PUBLIC AND PRIVATE SECTORS

128. The success of the second IDDA would depend upon the efficiency and effectiveness of the economic operators, both in the public and private sectors, who in essence would be principal executors of the programmes of industrialization. The public sector had played the dominant role in African industry. It was necessary to increase intra and inter-country competitiveness and provide incentives and support to private entrepreneurs as partners and contributors to industrial development.

129. While private sector participation would include foreign investment, which was useful for injections of capital, foreign exchange and technology, the main thrust of the second IDDA programme should be on developing and strengthening the indigenous private sector. To achieve this, a major programme of entrepreneurship development and promotion of small- and medium-scale industries as well as the informal sector is to be implemented.

130. The expansion of entrepreneurial effort and the promotion of the private sector would necessitate the support of the public authorities through the creation of an enabling environment; the building up of physical and institutional infrastructure; the provision of credit facilities and the

strengthening of non-governmental organizations such as chambers of commerce and industry associations.

131. The performance of the existing public sector industries in Africa has generally been poor, with low productivity, underutilization of capacity and incurring of losses. However, the question of the future role of industrial public enterprises would need to be reviewed by each African country depending upon its own specific circumstances. Such review raises a range of possible options, including the following:

(i) Retention of certain industries in the public sector for strategic reasons;

(ii) Commercialization of public enterprises, through reduction of governmental intervention, granting of managerial autonomy and profit orientation;

(iii) Reorganization and restructuring, including partial privatization through sale of equity shares to the private sector;

(iv) Total privatization where appropriate;

(v) Liquidation of public sector industrial activities which have outlived their utility and serve no specific social or economic purpose.

132. In examining these options, African Governments would need to consider their impact on employment, prices, availability of goods and services and other socio-economic factors, so as to ensure the least amount of social and economic dislocation during the transitional period.

II. INDUSTRIAL EXPANSION

II.1. METALLURGICAL SECTOR

133. The metallurgical sector industries play a significant role in the process of industrialization and economic development. Their close interlinkage with engineering and allied metalworking activities makes it possible to consider metallurgical industries as a core sector for IDDA II. Indeed, the metallurgical sector has played a dominant role throughout the industrialization process of industrialized countries.

(a) Major metallurgical raw material reserves in African region

134. The natural resource reserve for developing the metallurgical industries particularly iron and steel industry are estimated to be:

- 25.8 billion tonnes of high grade iron ores;
- 135.5 billion tonnes of cooking coal;

- 9.145 billion tonnes of oil;
- 2,513 billion cubic metres of gas.

135. In addition to these, the region is endowed with ores and minerals containing chrome, cobalt, vanadium, titanium, manganese, silica, flourspar, nickel, copper, tungsten and many others.

136. The estimates of 1987 indicate that the African share of crude steel production was only 1.39 per cent of the world production of 740 million tonnes per year.

(b) Existing capacities for crude steel and rolling production in the African region (covering 23 countries)

137. The following are the existing capacities in Africa:

- Large integrated steel plants - 5.51 million tonnes per year
- Mini-steel plants (mostly re-rolling) - 3.98 million tonnes per year.

138. The total crude steel and rolling capacity is 9.5 million tonnes per year. The actual production of crude steel accounts for only 20 to 50 per cent of the rated capacities in the region.

Subregion	No. of units	Large integrated steel plants mtpy (above 500,000 mtpy capacities)	No. of units	Mini-steel plants (including re-rolling mills)(mtpy)
North Africa	3	3 562 000	4	187 500
West Africa	1	1 000 000	20	1 999 000
Central Africa	-	-	3	300 000
Eastern and Southern Africa	1	950 000	23	830 600
Total	5	5 512 000	50	3 984 000

(c) Demand for steel in the African subregions

139. The total demand projections for crude (direct and indirect) steel for the African region is summarized below. Projections are based on average steel intensities in GDP and on trend scenario (including both direct and

indirect demand and assuming indirect demand as 20 per cent of the total demand). In spite of the relatively large projected demands in some of the subregions, it may not be possible, even in the long run, to manufacture all types of steels mainly due to technological sophistication as well as economic scale.

Estimated crude steel demand in African subregion

Subregion	Population in 1985 (millions)	Total projected crude steel demand (trend scenarios) (mtpy) 1990	2000
North Africa	107.70	14.02	28.88
West Africa	168.82	5.12	10.93
Central Africa	61.50	1.45	3.23
Eastern and Southern Africa	167.10	3.53	8.35
Total	505.12	24.12	51.39

140. The subregional demand scenario and the available capacities of crude steel production clearly indicate that iron and steel industry development has not occurred in a balanced form in the four African subregions. For instance, the iron and steel industry in Central Africa is very weak. This is, in part, explained by the fact that local metal fabrication or engineering and metal working industries are either non-existent or exist at a very low level of development in this subregion.

141. In the Northern and Western African subregion, demand for steel will be much higher than the existing facilities of crude steel production capacities. There is great scope for extension and upgrading of existing mini-steel plants to mitigate the future expanding demand of the subregion.

142. In the Eastern and Southern African subregion the demand for crude steel will be tripled in the year 2000 due to considerable expansion in the engineering and allied metal working industries in this subregion. Here again, the mini-steel plants will make a significant contribution towards iron and steel development. Analysis shows that existing capacities for mini-steel plants are almost equal to that of integrated plants in the PTA subregion. It is expected that new technology of crude steel melting will play a contributory role in developing iron and steel industries in this subregion.

(d) Trends in crude steel manufacture in African region

143. The conventional route of iron and steel making i.e. blast-furnace-basic oxygen furnace (BF-BOF) route is highly capital intensive and the minimum economic size has increased in recent years from 1.0/1.5 million tonnes per

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year to 4.0/5.0 million tonnes per year. Furthermore, metallurgical coal is required for producing hot metal in BF for subsequent conversion into steel.

144. There has been tremendous development in the recent years in the alternate "direct-reduction/electric arc furnaces" (DR-EAF) for steel making. During the last 30 years, DR technology became well established. The major advantages of the DR-EAF route of steel making are well known e.g. smaller capacity reduces low capital outlay, less gestation period, use of non-cooking coal or natural gas as reductant.

145. The weakness of the present iron and steel industries in African region is its dependence on scrap, whose availability is depleting. At a realistic consumption rate, supplies of scrap will last even for less than a decade in most of the African countries. On the other hand, estimated iron ore reserves are 25.8 billion tonnes containing high grade ores ranging from 55 to 64 per cent of Fe content. The immediate strategy of the iron ore bearing countries will be to critically examine the exploitation of these valuable resources to supplement scrap availability on a long-term basis. The directly reduced sponge iron (DRI) using coal as reductant may resolve some of these chronic problems being faced by the iron and steel industries in the African continent.

(e) Foundries

146. There are about 250 foundries in Africa

- Eastern and Southern Africa - 130 foundries
- Central Africa - 5 foundries
- Western Africa - 40 foundries
- Northern Africa - 75 foundries

147. This low level of foundry activity is responsible for the lack of growth of engineering industries in the subregions. The majority of the existing foundries are severely underutilized due to lack of raw materials, trained manpower and local R & D support all of which critically affect the markets. The majority of the existing foundries produce poor quality shape castings which require considerable attention and technical assistance.

(f) Forging and heat treatment

148. Most of the African countries have traditional activities of forging at village blacksmith levels, generally not being supported by technological back-up support arrangements. Most of these blacksmiths produce simple agricultural hand tools and fabricated products for rural consumption. There are thousands of village blacksmiths and metal fabricators working in Africa. They all now require improved metalworking tools, raw materials e.g. carbon steel, heat treatment facilities, product design and training.

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(f) Existing status of non-ferrous metallurgical

149. Africa has abundant resources of non-ferrous metals. A substantial amount of copper ore is produced. The smelter and refinery production is also substantial; however, the consumption and production of semis is very low. The companies are mainly interrelated to transnationals. The role of IDDA II would be in strengthening the smelters and refineries by introduction of new products in the downstream sector (tyres, flats, rods, wires, cables, etc.) for the African and other export markets.

150. In the field of bauxite, Africa has abundant resources. The alumina production is less than 600,000 tpa which can be regarded presently as medium to small operations. Primary aluminium is produced in some countries.

151. Presently the technological background of this industry is not satisfying the expectations and future demands of the growing industry. It is proposed to provide assistance in energy conservation of the aluminium smelters, prepare an environment audit of selected bauxite mines, alumina plants and smelters, and make recommendations for the strengthening of the pollution control and monitoring and abatement systems, introduce or upgrade environment legislation, and increase the environment awareness of the governments and industry. It is advisable to diversify the production of the industry and strengthen intra-African trade, utilizing the complementarities and comparative advantages of the region. New materials, semis are required in growing quantities on the continent. Production of by-products, derivates and recycling of scrap and waste is a fruitful area of technical assistance.

152. Apart from aluminium and copper, there are several other metals on the continent which are or could be commercially utilized. The most important are zinc, lead, nickel, mercury, silver, gold. These and other ores are utilized also to an insufficient extent which might require IDDA II technical inputs.

(g) Strategy for the metallurgical sector

153. The major strategy for the development of the metallurgical sector, emerging from the national programmes is:

- shifting policy towards small-scale exploitation of high-grade iron ores and auxiliary minerals for the production of sponge iron in selected countries endowed with such reserves;

- establishment of scaled down plants of high grade DRI-sponge 20,000 to 50,000 tonnes per year to cater to the needs of inputs to existing furnaces of rolling mills and when carbonized to use sponge iron for foundry work. The major role of these plants will be to augment capability development, local R & D, saving of foreign exchange and subregional export of reasonable surplus of sponge iron and other non-ferrous and ferrous auxiliary materials;

- rehabilitation, regeneration and upgrading of existing large iron and steel plants and all mini-steel mills in the region. Particular

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emphasis will be given to producing engineering machining quality steel and non-ferrous sections in selected rolling mills in the subregion;

- creation of national and subregional metallurgical testing and R & D institutions in existing steel mills;
- exchange of resources and restructuring of plants within the countries of a subregion;
- promotion of subregional marketing and economic movement of iron and steel products;
- upgrading of existing foundries, forges, heat treatment facilities and interlinking their activities with the integrated steel mills, mini-steel plants and R & D institutions in the subregion;
- Promotion and reinforcement of private entrepreneurs in this sector.

(h) Plans for metallurgical industries in the national programmes

154. The national programmes have fully recognized the central importance of this sector as a core industry with a multiplier effect. The projects included in the national programmes for the second IDDA include:

- rehabilitation, modernization and diversification of existing integrated iron and steel plants;
- expansion of capacity of some of the existing integrated steel plants;
- rehabilitation, modernization and expansion of steel rolling mills;
- projects in several countries for the production of sponge iron based on the DR process;
- upgrading of existing smelters for copper and aluminium;
- establishment of some new aluminium smelters;
- establishment of Metallurgical Technology Centre for the PTA countries;
- setting up of an Aluminium R&D Centre, with UNIDO assistance.

II.2. THE ENGINEERING AND ALLIED METALWORKING SECTOR

155. Engineering and allied metalworking industries cover heat treatment, machine shops, toolroom and metal coating plants. These are basically core support industries for the manufacture of a wide range of:

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- agricultural machinery and equipment;
- machine tools and metal working machinery and other capital goods;
- transport equipment;
- spare parts and auxiliary engineering products;
- elements for buildings and construction.

156. In most of the African countries engineering and allied metalworking activities are extremely limited. The major inputs e.g. iron and steel, brass, aluminium, non-metallic materials are imported in the majority of the African countries.

157. Skilled operatives are in acute short supply, the majority of the plants are underutilized, production techniques are frequently outdated and expensive, engineering design, process planning are non-existent in the majority of the countries.

Agricultural hand tools manufacture in the subregion (organized sector)

158. Hand tools are still basic tools for peasants with small holdings who form about 85-90 per cent of the agricultural population in the African region. Almost all the African countries have facilities to manufacture agricultural hand tools e.g. fork, hoes, cultivators, etc. in the organized sector. The main constraints of these production facilities are lack of carbon steel, lack of dies, and tool making and die maintenance facilities, lack of skilled operatives and production supervisory staff. Substantial markets do exist in almost all the subregions. Due to low capacity utilization of plant and machinery (20 to 40 per cent) of existing facilities, the majority of the African countries are importing hand tools from abroad.

Machining and metal fabrication

159. The metal fabrication and machine shops can be categorized as:

- Large-scale establishments - those include railway workshops, dock yard workshops, PWD workshops, fabrication shops of large construction enterprises, assembly of automobiles, large maintenance shops of sugar mills, cement mills, beverage industries etc. Generally, heavy machineries are used with substantial import of parts and components from abroad.

- Medium and light engineering industries - which cover a wide range of activities mostly related to manufacture of fixtures and fittings, office furniture, doors and windows, hardware, agricultural machinery parts, animal drawn implements, food-processing equipment, spare parts, fabricated pipe products, structural fabrication, selected capital goods manufacture, automobile ancillary parts (exhaust pipes and filters).

160. Welding technology has improved considerably in Africa. Its applications are visible in all engineering activities. Again, the major constraints of these industries are non-availability of raw materials, electrodes, improved product designs, design adaptation facilities and acute shortages of skilled operatives.

161. In 1985-1986 a survey on engineering industries in PTA region organized by UNIDO/ECA/PTA reported that in the PTA region, the following capacities are available for animal drawn implements.

Existing capacities	Present production	Demand by 1990
357,000	146,000 units	1,100,000 units

162. It is expected that the demand for animal drawn implements throughout the region will be 4 million units during 1990s. Some African countries manufacture power operated implements. A few of them manufacture and assemble machine tools e.g. lathes, drilling, milling and shaping machinery.

Toolrooms

163. Few countries have reasonable toolroom facilities for the manufacture of jigs, fixtures, dies etc. Raw materials for toolroom e.g. quality steels are imported in the region.

Metal coating plants

164. Some countries have metal coating facilities e.g. Ni-Cr. plating. Conventional plating technology has developed well in the African region.

(c) Strategy for the engineering and allied metalworking industries development in the African subregions

165. Engineering industries in the Northern, Eastern and Southern African regions, although developed to some extent, still have fairly low levels of self-sufficiency in manufacturing compared with other developing countries.

166. This is partly because market development of many engineering products in African countries needs consolidation in order to plan economic levels of production. In addition to this, the metallurgical industries are not fully integrated with engineering industries in the majority of the African countries. It is to be noted that most of them are dependent on import of essential raw materials for their production requirements due to the fact that basic metal industry development is still in an infant stage. The establishment of well-run engineering and metalworking industries calls for a highly skilled labour force which is yet to be generated in the African countries.

167. In view of the above constraints, the following strategies have emerged from the national programmes for engineering industries development:

- Imparting on-the-job training for technicians by foreign and local experts;

- Giving incentives for export-led industrialization along with the import substitution sector by way of investment schemes for foreign entrepreneurs;

- Establishing a technology standards bureau in each country to screen the various technology alternatives in the light of their appropriateness, labour intensiveness, financial implications, project cycle-time, economic and market viability and the right technology for a given product;

- Locating new industries in relatively less developed areas;

- Setting up of medium, small scale and village industries which are agro-based;

- Upgrading and revitalization of existing industries for the production of the major agricultural inputs including farm implements, ox-drawn ploughs, pump sets, tractor-drawn implements and tractor spare parts, machetes, plough shears, plough chains, axes, etc;

- Setting up/strengthening the activities of small industries development organizations and village industries service centres for reorganization of private domestic manufacturing sector;

- Standardization of the transport vehicle fleet to only a few makes for facilitating indigenous manufacture of spares;

- Consolidation of plant, machinery and equipment with the existing industries by adopting preventive maintenance practices, manufacturing spare parts and readjusting through innovations;

- Upgrading the High Precision Technology Centres and greater utilization of existing regional centres for technological and human resources development;

- Allowing the local industrial enterprises to respond more freely and rapidly to market signals, monitoring the compatibility of their market prices with the end user prices, particularly in the consumer durables segment of manufacturing industries;

- Strengthening the official credit lines and institutional support, for medium and long term investment lending;

- Manufacturing of freight handling equipments for railway stations, transport depots and airports.

Projects for the sector in the national programmes

168. Among the important projects for the development of engineering industries included in the national programmes are:

- tractor factories;
- programmes for setting up plants to manufacture agricultural implements;
- production of pumps for irrigation purposes;
- plants for household appliances.

II.3. THE CHEMICALS SECTOR

(a) Strategy for the sector

169. Like the metallurgical and engineering industries, the chemicals industry is a vital factor in the industrial and technological scenario of the industrialized world. The term "chemicals industry" covers a huge and highly diversified range of industrial products, running into several hundred thousands of items. The basic groupings are fertilizers, organic and inorganic chemicals, pharmaceuticals, paints and dye stuffs.

170. The importance of the chemicals sector was highlighted by the Lagos Plan of Action and the first IDDA. In developing a strategy for this sector, three factors demand consideration:

1. That Africa is a substantial consumer of fertilizer, pharmaceuticals and other chemicals.
2. That the bulk of these items are currently being imported from the industrialized world.
3. That Africa has a substantial reservoir of raw materials suitable for the chemicals industry.

171. Although these factors, prima facie, point towards the promotion of the chemical industry in Africa, the special features of the industry need to be considered with great care:

- the industry at the basic and intermediate level is highly capital intensive and calls for enormous investments;
- technologies are complex, sophisticated and fast changing;
- energy consumption is generally very high;
- employment generation as a ratio to capital investment is low;

- the environment and the ecosystem are highly vulnerable to chemical industries;
- this is a highly competitive international industry;
- the plants would have to recognize the economies of scale.

172. With the possible exception of half a dozen larger African countries, the setting up of chemical industries at the basic and intermediate levels based on limited national markets may not be an economically viable proposition. Activity would rest mainly on formulation, blending and packaging. The implications are clear enough. If Africa desires to set up large-scale chemical industries and this desire has been strongly expressed, the only viable route is through regional cooperation, extended markets and multinational ventures.

(b) Fertilizers

173. Africa (excluding South Africa) today contributes only 1.9 per cent of world fertilizer production.

174. Fertilizers based on ammonia, nitrogen, phosphoric acid and Urea are being produced in many of the African countries. Sulphur, sulphuric acid based chemicals are also manufactured. Expansion may be particularly viable in the countries having high demand for fertilizers by African standards. Significant investments will be required in the fertilizers industry to keep pace with a growing demand for fertilizers, to upgrade existing plants and to increase product diversification.

175. Although there is availability of basic raw materials essential to the manufacture of fertilizers in Africa, such as natural gas, petroleum, phosphate rock, some schemes have been suspended either because of excess world production or because of non-availability of finance. There will be various investment possibilities in the period of the second IDDA amounting to about US$ 2,319 million at 1991 prices.

(c) Pesticides - current status and programmes for the second IDDA

176. There is very little production of pesticides active materials in Africa. Active materials of natural plant extracts like pyrethrum, chlorinated pesticides like DDT (copper, oxychloride, zinc phosphate, dichlorous, tricholorfous, 2, 4-d0 in small quantities have been the only items produced in Africa. Africa has been the major source of pyrethrum, producing about 90 per cent of the supply. Because formulation units are less capital-intensive and simpler to operate than manufacturing plants for active ingredients, some countries in Africa have established such units.

177. The production of pesticides involves raw materials, intermediates and final products that are more reactive, explosive and toxic than in most other industries. Raw materials such as cyanide, carbon disulphide, various amides

and concentrated acids and caustics are very hazardous in nature. Extra care is required in terms of a relatively safe process, the selection of a site based on proper environment impact assessment and a well detailed risk analysis of specific hazards and disaster planning. However, pesticide formulation, packaging, batch mixing and blending operations are by nature not significant risks as far as ecology is concerned.

178. Africa's pesticides imports amounted to about US$ 463 million in 1987. Most of the crop protection chemicals business is in the hands of transnational chemical companies. Business is done through subsidiaries or through agents. Most companies find it convenient to import ready-to-use formulation rather than importing the required raw materials and formulating within the country which involves the establishment of an elaborate infrastructure.

179. Total exports of pesticidal products from African countries averaged about US$ 19 million per year, most of which were re-exports of active chemicals. Total investments for pesticides, insecticides formulation and in some selected cases for basic materials can be estimated as amounting to US$ 645 million during the period of the second IDDA at 1991 process.

(d) Other chemicals - current status and programmes for the second IDDA

180. Various national programmes have indicated setting up chemical industries in the area of industrial gases, acids, plastics, perfume and cosmetics and soaps and detergents, industrial chemicals and dye stuffs.

181. The chemical industry producing paints, industrial gases and the like will expand more than fertilizers and pesticides industry. Further diversification and vertical integration will take place. The growth of these industries would require for plants and rehabilitation investment which can be estimated at 1991 prices at about US$ 940 million.

(e) Pharmaceuticals - current status and programmes for the second IDDA

182. The pharmaceuticals industry is limited to packaging activity in Africa except a couple of antibiotic plants in some north African countries. There are some plants producing antimalarial drugs, vitamins, cough syrup, antibiotics in some of the African countries. Because of the need for improvement of health conditions and also because of private initiatives in the pharmaceutical field there will be several pharmaceutical projects all together requiring investment of about US$ 476 million in the coming 10 years.

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II.4. AGRO-INDUSTRIES AND FOOD PROCESSING

(a) Importance of the agro-industrial sector

183. There was an unfortunate trend in the eighties to neglect agriculture, which provided the wealth of Africa. During the decade of the eighties, population growth outstripped food supplies and Africa was compelled to import food for its very survival. The traditional earnings on agricultural exports dropped and there was a decline in world prices of primary commodities. Thus the decline in agriculture exacerbated Africa's debt burden.

184. It was in recognition of this crisis situation that APPER (Africa's Priority Programme for Economic Recovery 1986-1990) emphasized as a major priority area "measures for special action to improve the food situation and the rehabilitation of agricultural development in Africa".

185. The strategy for the second IDDA recognizes the primary role of agriculture and the mutual interdependence and interlinkage between agriculture and industry. In particular the following factors are accepted by all African countries and underlie the approaches adopted in the national programmes:

- A healthy agricultural growth is essential to ensure food security;
- Agricultural surpluses provide a reservoir for export earnings, which in turn, makes available foreign exchange resources for industrial development;
- Agricultural prosperity and high agricultural incomes create markets for industrial goods;
- Agricultural outputs are the foundation of many sectors of industry (textiles, leather and food processing);
- Industrial outputs are absorbed as agricultural inputs (implements, fertilizers and pesticides).

186. At its 9th meeting, the Conference of African Ministers of Industry had highlighted the need to develop the food-processing industries of Africa, (Decision 10(IX)).

187. The framework and guidelines suggested, among the priorities for programmes of expansion and new investments, agro-industrial linkages and food-processing industries. In this context, an integrated programme approach to food processing and other agro-related subsectors has been developed by UNIDO, providing a tool for the systematic development and pragmatic planning of agro-industries in Africa. The World Bank's Long-Term Perspective Study also stresses the key role of agriculture and food production and the agro-industrial linkage.

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(b) Agro-industries in the national programmes

188. The national programmes fully reflect the above-stated concerns. All the national programmes place agro-industrial development high on the priority list. In many of the African countries food and agro-industries contribute for maximum percentage of MVA, even 75 per cent for some countries. These industries provide more employment in particular to women. The following branches are given priority for the second IDDA:

- Edible oil mills;
- Fruit and meat preservation;
- Fish processing;
- Salt manufacturing;
- Milk products;
- Sugar;
- Coffee.

189. Particular attention has been drawn to post harvest wastages of agricultural products. Necessary steps are to be conceived in the national programmes for treatment and storage of these products. A mechanism could be evolved for intra-African exchange of agricultural surpluses. An important issue which national Governments will need to bear in mind is the question of agricultural pricing policies and their impact on agricultural production.

II.5. FOREST-BASED INDUSTRIES IN THE NATIONAL PROGRAMMES

190. Many of the member States are rich in forestry resources. Fully conscious of the problems of environmental degradation which could arise, and indeed have arisen, because of indiscriminate hacking of the forests, there is equally a realization that the forests contain a potential wealth in the shape of export earnings and as a provider of inputs for wood-based industries.

(a) The importance of African forests

191. Wood is an all-purpose raw material. It can be used for construction of buildings, for furniture and joinery production, for boat building, for bridge building, for railway sleepers and telegraph poles and as a packaging material. Africa's wealth in timber resources has not been adequately exploited. The production of manufactured wood products is generally at the craft level and exports consist mainly of logs and semi-processed products.

192. During the second IDDA the strategy of developing forest-based industries would include:

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1. Steps to prevent the degradation of the forests by controlling illegal felling and erratic shifting cultivation and by reforestation programmes;

2. Reducing the export of logs in a raw state and creating value added by rationalizing and modernizing saw mills;

3. Developing wood based industries;

4. Upgrading of skills in forestry, carpentry, joinery and cabinet making.

(b) Forest-based industries in the national programmes

193. Many of the national programmes have identified the following forest industries for investment and expansion in the second IDDA:

- Carpentry units to manufacture doors and windows;
- Paper and pulp factories;
- Plywood, blackboard and flush doors, multi-ply sacks;
- Fiber board plants.

(c) ECA-FAO-UNIDO support

194. At the international level, a division of responsibility has been arrived at between FAO and UNIDO in this field. FAO is responsible for forestry and for primary wood-processing industries (up to the stage of production of sawn wood and wood-based panels) whereas UNIDO is responsible for secondary wood-processing industries (furniture, housing, bridges, etc.).

195. A major project launched by FAO and UNIDO is the intraregional cooperation in development of plantation-based forest industries. The project covers the PTA region and includes subjects like timber construction, timber pile driving, bridge building, furniture making and joinery.

196. The joint efforts of UNIDO, FAO and ECA should make a major contribution to the development of forest-based industries during the second IDDA.

II.6. LEATHER AND LEATHER PRODUCTS

(a) Strategy for development of the leather sector

197. One of the guiding considerations for industrial development in Africa is that industrial investment should be based on Africa's natural wealth and resources. One such enormous resource in the continent is its large cattle, sheep and goat population, which provides the potential for a viable leather and leather products industry. UNIDO estimates prepared in 1989 reveal that

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Africa possesses 13 per cent of the world's cattle population, 17 per cent of the world's sheep and 23 per cent of the world's goats.

198. The relevance of promoting the leather and leather products industry in Africa is, inter alia:

- That it is based on the use of domestic factor inputs;
- That it is a major employment generator;
- That the technologies involved are comparatively simpler to absorb and adapt.

199. A recent survey conducted by UNIDO found that this sector was poorly developed in the majority of sub-Saharan countries, unlike North African countries. The survey highlighted the following characteristics of the sector as it stands today:

- Thirty to 50 per cent of the potential raw material is not recovered. Hides and skins of slaughtered animals are consumed as food or left to rot for want of incentives, collection networks or transport facilities;
- The amount of leather tanned is less than one third of the available raw material and even this is processed only up to the intermediate stage;
- The majority of the existing tanneries operate at less than 50 per cent of installed capacity;
- The leather products manufactured represent far less than 30 per cent of the sector's potential.

200. It is estimated that losses due to non-recovery of hides and skins may amount to as much as US$ 452 million every year. Downgrading of raw hides and skins due to employment of incorrect techniques during flaying and curing may give rise to further losses of the order of US$ 400 million annually.

201. One of the major developments expected during the period of the second IDDA is the implementation of the Regional Africa Hides and Skins, Leather and Leather Products Improvement Scheme (US/RAF/88/100). This is the largest IDF programme and comprises several new elements in the so-called "programme approach". The programme is the joint effort of UNIDO, FAO and ITC. UNIDO is the executing agency and provides the total funding through IDF special purpose contributions from six donor countries. Following the preparatory phase, the project will cover groups of countries with similarities and close ties. There will be two such "umbrella projects", the first covering francophone countries of West and Central Africa and the other covering anglophone countries of East Africa. These projects will provide expert services of international consultants aimed at improving the hides and skins sector and rehabilitation of selected tanneries and leather product plants.

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The project for East Africa, which has already commenced, will be operated from Nairobi at the Kenya Industrial Research and Development Institute (KIRDI) and that for West and Central Africa from the Centre National de Cuir et de la Chaussure, Tunis. The purpose of the regional umbrella project is to obtain maximum benefits from and utilize in the most economic way possible the international inputs for the participating countries, while catering to their specific needs in individual national projects.

202. The outputs expected from this major project are:

1. Improved policy guidelines and industrial strategy for the development of the region's hides and skins, leather and leather products industry development. This output will be in the form of a regional document specifying, firstly, the regional aspects and, secondly, the individual country aspects;

2. Established and/or rehabilitated, well-operating national hides and skins, leather and leather products improvement schemes with trained flayers, skinner and improvement officers, and better tools and chemicals for conservation;

3. Improved statistical intelligence throughout the region. A uniform statistical country report will be provided periodically to the regional office for analysis and transmission to UNIDO/FAO/ITC for further monitoring and dissemination;

4. Improved quality of raw hides and skins through incentives to primary producers, and a realistic grading system, based on a well-operating hides and skins improvement scheme (as per output 2). The quality monitoring is closely connected with the improved statistical intelligence and the results of this output will be judged on the basis of the statistical data pricing and grading to be collected under output 3;

5. Increased collections of raw hides and skins. The increased quantity is expected to be achieved through minimizing waste and through providing suitable incentives to the primary producers. The results of the output will be monitored through the statistical intelligence to be collected under output 3;

6. Rehabilitation plan for selected tanneries and shoe factories for improved productivity and trained personnel. The factories to be selected for the rehabilitation programme are described in more detail in the individual country documents. To facilitate monitoring, the baseline situation of each selected factory will be established prior to starting the rehabilitation programme. In addition to the rehabilitation studies to be carried out under this output, the actual rehabilitation of the selected factories, mainly

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balancing up and renovating equipment and other necessary infrastructure, will be done with the additional funds available through project US/RAF/88/102;

7. A well-functioning model effluent treatment plant located in a suitable tannery for demonstration and training purposes on a regional level;

8. A list of suitable technical, marketing and/or joint venture partners for the various tanners and leather products manufacturers. Through meetings, contacts between individual potential partners to discuss concrete collaboration opportunities. At least one such meeting will be organized in each participating country.

(b) Programme for leather development incorporated in the national programmes

203. A perusal of the national programmes shows that the member States have responded positively to the need to upgrade this sector of industry.

204. From the national programmes it can be seen that due attention is given to this sector. Many of the countries have plans to set up tanneries, leather finishing, footwear and leather goods industries. UNIDO has provided substantial inputs.

II.7. FISHERIES INDUSTRIAL SYSTEMS

(a) Strategy for the sector

205. African waters including the sea, the rivers and inland lakes are prolific breeding grounds for fish. Herein lies an enormous reservoir of wealth, both for supply of nutritional requirements to the African people and for earning valuable foreign exchange. Fishing in Africa is traditionally an individual and small-scale affair. In the international world, fishing is big business. It is highly organized and is being run as an industry.

206. One of the major thrusts in the second IDDA is the promotion of fisheries as an industry. In this context, a lead has been given by UNIDO in developing the "integrated planning of fisheries industrial systems in Africa", a paper on which was presented at the ninth Conference of Ministers of Industry (ICE/1989/2). Fisheries activities, it is urged, are linked to a large number of industrial sectors. Thus the integrated development of the fisheries sector can promote important industrial developments in other sectors such as the capital goods sector (boat building, marine engineering, processing, refrigeration and ice manufacture) and food-processing sectors, infrastructure, fuel and power supply. The FIS is defined as "a system where all the industrial resources and consumption components related to fisheries activities in a given country as well as the institutions and policies that affect those activities interact in an integrated and interdependent manner".

A strategic approach based on analytical studies of seven clusters of countries of the same typology has been suggested.

(b) Projects in the national programmes

207. The national programmes of countries which have fishery resources include a number of projects for promoting this sector.

208. These projects relate to increasing the potential catch, fish processing, ice plants for preservation and exploitation of other sea resources. Some countries give priority to fish culture and popularization of fish farming in rural areas.

II.8. TEXTILES

(a) Strategy for the sector

209. Food, shelter and clothing are the three basic human needs. The textile industry provides for the last of these plus serving as an input for industrial material. The industry depends upon a variety of raw materials - cotton, silk, jute, wool and artificial fibres. So far as Africa is concerned it has abundant resources of raw cotton but lacks the others. Climatic conditions also make cotton the most suitable fabric for use. The basic strategy clearly is the promotion of the cotton textile industry in Africa. There is also a possibility of promoting the rayon industry based on Africa's forest wealth. Downstream there is a strong case for developing the African garment industry. The basic elements of a strategy for the textile subsector would need to include:

- An assessment of the clothing needs of the African people;
- A drive towards the increase in the per capita consumption of textiles;
- Efforts to develop and utilize local raw materials;
- Standardization of textile specifications to achieve cost-effectiveness;
- Quality control;
- Promotion of intra-African trade;
- Development of the garment industry;
- Promotion of export-oriented textile industry.

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(b) Textiles in the national programmes

210. There is recognition in the national programmes of the importance of the textile sector. Four main thrusts appear:

- Plans for rehabilitation of existing textile mills to optimize production;
- Fresh investments based on domestic materials or imported materials to create value-added;
- Creation of a domestic garment production industry;
- Promotion of exports, particularly of garments.

II.9. CONSTRUCTION MATERIALS

(a) Strategy for developing the sector

211. One of the basic international industries is the production of building materials for construction. A priority element in Africa's development is urban and rural housing for its fast expanding population. In addition, the development of the physical infrastructure - roads, bridges, seaports, airports - and the provision of social services like schools and hospitals demands vast quantities of construction materials.

212. Apart from construction materials based on iron and steel and other metals (dealt with earlier in the metallurgical and engineering and allied industries) a variety of other materials are needed - cement, clay-based products, lime, plaster, sheet glass, wood-based products. Most of the basic raw materials for these products are abundantly available in Africa. The need for building materials and the developmental objective of promoting the use of domestic factor inputs points clearly to the development of this industry. Advantages of this industry are that it is suitable for all sizes of production - large, medium and small; that it is a substantial employment generator and that it provides high manufacturing value added. Hence, the construction materials industry is a top priority area for the second IDDA.

213. The strategy for the sector includes the following elements:

- Maximization of the use of local materials;
- Promotion of research and development and technology adaptation to advance the use of the locally available materials;
- Standardization of specifications of building materials for optimizing production and for facilitating intra-African trade;
- Review of building codes to permit and encourage the use of local building materials;

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- Development of low-cost building designs;
- Conversion of agricultural and industrial wastes into building materials;
- Training of skilled labor and managers of the construction industry.

(b) Programmes for the sector included in the national programmes

214. The importance of promoting the construction materials industry has been fully recognized in the national programmes. Projects have been included for manufacture of cement, bricks, sheet glass, roofing materials, building components of iron and steel, aluminium and other metals, ceramics, window frames and panelling of wood.

215. However, it would appear that the national programmes have not viewed building materials as a separate industry but rather as an offshoot of other industrial subsectors like metallurgy, engineering and metalworking, chemicals and forest-based products. While there is a basic logic in this approach, it would be desirable to view construction and building materials as an industry in its own right with its special problems, its characteristics and its own strategy.

216. It is therefore suggested that each member State may consider setting up a task force to review the status of the building materials industry, to assess the country's need for such material, to examine the special problems involved, to consider the possibility of promoting intra-African trade in this area and to work out an action plan. The support of UNIDO may be sought in this connection.

II.10. PACKAGING

(a) Strategy for developing the sector

217. While the building materials subsector deals with infrastructural inputs for industrial growth, the packaging subsector is involved at the other end of the industrial spectrum, dealing with the outputs of agriculture and industry. Packaging is of fundamental importance to agriculture to ensure protection of fresh food, prevention of waste and safe and convenient delivery to consumers. Substantial losses which currently occur in Africa on agricultural output could be greatly reduced by proper packaging.

218. Packaging is of equal significance for the handling, transport, storage and distribution of industrial products. Packaging assumes particular importance in the movement of products from rural to urban areas, in promoting intra-African trade and in developing the export front.

219. Packaging materials are of a diverse range, including wood-based products - boxes, crates, barrels, pallets; fibre-based products - bags, nets, cords, fabrics; forest-based products - wrapping paper, cardboard containers

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and moulded pulp; glass containers; ceramic containers; metallic products - cans, drums and aluminium foil; and plastic products - bags, sacks, nets, cords, wrapping sheets.

220. The strategy for the packaging industry would include the following components:

- Promotion of the use of domestic raw materials for packaging;
- Research and development and technology to adapt local materials for the purpose;
- Standardization of packaging sizes and specifications;
- Promotion of information regarding the necessity and utility of adequate packaging;
- Training of skilled workers and managers of the industry.

(b) Plans for packaging in the national programmes

221. The national programmes have recognized the need for appropriate packaging, particularly those countries which are promoting export-oriented industries. However, as in the case of the building materials subsector, the national programmes have tended to view the packaging materials industry as a by-product of the main resource based subsectors - metallurgy, chemicals, forest industries etc. - and the packaging projects are included in these sectoral strategies.

222. As packaging is a critical component of industrial development and as it has special characteristics of its own, it deserves a specialized treatment. Consequently it is suggested for the consideration of the member States that the national programmes for the second IDDA would be greatly strengthened if an independent review be made of this subsector covering issues such as:

- Assessment of the country's packaging needs;
- Inventory of raw materials available locally;
- Review of the existing packaging facilities;
- Development of an overall strategy to promote the packaging subsector.

III. PROMOTION OF THE SMALL-SCALE AND MEDIUM SECTOR AND ENTREPRENEURSHIP DEVELOPMENT

223. The creation of an industrial culture in Africa cannot depend solely on the effort of Governments, on State entrepreneurship and on a dominant role of the public sector, as is the current situation. Apart from the past experience of sub-optimal performance of State-owned enterprises, the management of public sector companies presents some inherently structural problems. Issues concerning public policy and social welfare and political considerations tend to supervene over issues relating to investment and return and the generation of profits, essential elements of the industrial culture. No doubt public enterprises will in the foreseeable future continue to play a major role in African industrialization. What is necessary is that the public authorities should insist that they be run as sound business concerns.

224. Nor can the creation of the desired industrial culture be made dependent solely on foreign investment. Certainly investment from abroad should be welcomed during the second IDDA because of the induction of sorely needed investment capital, technology, management and marketing know-how and it is expected that most African countries will create the right environment to attract investments. But foreign ventures should not become isolated islands. They need to create a multiplier effect, to develop African skills and to involve African entrepreneurial participation.

225. The real answer lies in the involvement of the African people in the second IDDA and the creation of an African entrepreneurial community. The nucleus of such a community already exists in the dynamic "informal" sector and the growing small-scale sector. Unregulated and unrecorded, the activities of the informal sector do in fact constitute a vital component of the economies of many African countries. They are competitive, cost-conscious, market-oriented and profit-oriented. They have developed their own grass-roots institutions to meet the demand for credit and their own information infrastructure. They are a training ground for future African entrepreneurial initiative. What is needed in the second IDDA is to bring the informal sector within the accounted economy and progressively to shift its activities from trading to small- and later medium-scale manufacturing.

226. The case for lending support to the informal and small-scale sectors is that their activities are ideally in tune with IDDA goals, namely:

- They are generators of employment;
- They are users of domestic factor inputs;
- They contribute to the pool of goods and services;
- They are building African capabilities;
- They are broadbasing industrial ownership.

(a) Measures for promotion of the small-scale sector

227. Governments of African countries have a specific responsibility for creating the necessary environment in which entrepreneurial development can take place and in which the small, medium and informal sectors can grow. The support measures called for include:

- Enunciation of a national policy relating to the growth of small- and medium-scale industry;

- Liberalization of licences for setting up small- and medium-scale industries;

- Provision of support services to assist small- and medium-scale industrial units;

- Loan finance on favourable terms;

- Setting up industrial estates;

- Provision of water supply and energy and other infrastructure;

- Entrepreneurship development schemes to train existing and potential small-scale industrialists;

- Assistance in securing foreign technologies;

- Grant of import licences for equipment and essential inputs;

- Establishing or strengthening institutions for the promotion of small-scale industries, preferably giving such institutions "single-window" powers to undertake the variety of support services outlined earlier;

- Training and orientation of administrators of small industry development organizations.

228. At the macroeconomic level, the overall improvement in the business environment will be facilitated by:

- Removal of undue and vexatious regulatory constraints;

- Protection of property and contract rights;

- Strengthening of financial, information and marketing systems;

- Local sourcing of government purchases;

- Strengthening of infrastructural linkages;

- Encouragement of industrial associations, trade and professional bodies and NGOs to help entrepreneurs to pool their interests and mobilize resources.

229. Special attention needs to be paid to the very large informal sector in Africa, which in fact is playing a major role in the economy of the continent. Steps should be taken to consider how best to bring the informal system within the formal system. Training and assistance schemes to upgrade informal operators into small- and medium-scale entrepreneurs need to be promoted.

230. The high priority given to agro-industries in the second IDDA should also result in stimulating rural industries. This will serve the purpose of generating local employment, reducing pressure on metropolitan cities and strengthening the agro-industrial linkage.

(c) Plans for developing small industries in the national programmes

231. The promotion of small-scale industries and the fall-out effect of stimulating entrepreneurial activity is a major component in the national programmes. Among the steps which are being taken, as reflected in the national programmes, are:

- Establishment of industrial estates/zones with provision of common facilities;
- Promotion of industrial cooperatives;
- Incentives such as duty concessions, tax reductions and other fiscal benefits;
- Provision of concessional finance;
- Setting up of small industries promotional organizations;
- Assistance in the preparation of feasibility studies, marketing plans and technology adaptation.

IV. SUPPORT SERVICES

IV.1. THE PHYSICAL INFRASTRUCTURE

(a) The criticality of the physical infrastructure for industrialization

232. One of the principal causes of weak performance of existing African industrial enterprises and equally a reason for the hesitation of foreign investors and disincentive to the growth indigenous entrepreneurship is the lack of an adequate supporting physical infrastructure.

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233. True enough, large-scale investments in the country's infrastructure is part of the wider exercise of nation building and impacts on all sectors of the economy, not only the industrial sector. Thus these investments cannot, strictly speaking, be categorized as "industrial investments" coming within the IDDA programme. Nevertheless, it is clear that the success of the second IDDA would very much depend upon the strengthening of the physical infrastructure. Furthermore, the actual cost of production and the competitiveness and cost-effectiveness of African industries would be conditioned by the availability and quality of physical infrastructural support.

234. The term "physical infrastructure" is used to cover a wide range of supporting services including:

- Roads and bridges;
- Ports and harbours;
- Shipping;
- Railways;
- Inland waterways;
- Civil aviation;
- Road transport and trucking services;
- Telecommunications;
- Water supply;
- Energy and electric supply;
- Warehousing;
- Postal services;
- Housing.

235. The impact of these services on the health, productivity, profitability and even the very survival of industries is self-evident. Transport and communications, roads, railways, ports, shipping and trucking services provide the lifeline to input supplies and to markets for finished products. The availability of regular supplies of power and water determine production and capacity utilization. Effective postal, telephone and telecommunications services influence the speed of managerial decision-making.

236. The criticality of physical infrastructure has prompted some industries to "internalize" infrastructural services. For instance, the large mining

enterprises in Africa had built their own roads, railways, housing colonies, water supply and electric power. Much of these activities are a legacy of colonial times when these enterprises started from grass-roots sites. However, the costs of putting up infrastructure internally are very high and can only be contemplated by large-scale industry. The bulk of African industry will continue to depend upon infrastructural support provided by the Government, by public sector enterprises and in some cases such as trucking services by private firms.

237. The various components of the physical infrastructure are, in most African countries, handled separately as specialized activities in different ministries and agencies, all of which are competing for funds and for a share of limited resources. There is an urgent need to ensure a coordinated effort and an integrated view of the infrastructural changes called for at the national level to activate the process of industrialization.

238. A final issue, but one of fundamental significance, relates to the geographic dimension of infrastructural development. While basically, the provision of physical infrastructure is a national responsibility, the size of African countries, their physical contiguity and their interdependence indicates that optimization of infrastructural development can be better achieved on a regional/subregional basis. The construction of highways, rail links, power stations and transmission lines, telecommunication, ports and inland waterways demand a regional effort. The programme for the second IDDA envisages the setting up of multinational industrial joint ventures. But perhaps a more effective and indeed more necessary starting-point should be regional cooperation in developing the infrastructure. Such an effort is being made in the field of transport and communications as part of the second United Nations Transport and Communications Decade for Africa (UNCTACDA) 1991-2000.

(b) Approaches to the development of the physical infrastructure in the national programmes

239. It is somewhat disappointing to note that rather sketchy references have been made in many of the national programmes to issues relating to the physical infrastructure. This is perhaps because development of the physical infrastructure goes well beyond the jurisdiction of ministries of industry and are within the competence of various other ministries and governmental agencies. The view is also perhaps taken that the massive investments to be made in ports, railways, roads, telecommunications, housing and other infrastructural activities cannot strictly fall within the category of industrial investments and would not therefore come within the IDDA programme.

240. Whatever the reasons may be for the comparative silence on this subject, the member States would do well to recognize that effective industrial development would not be possible unless the necessary physical infrastructure is created or upgraded. There are very few African countries which have anything approaching the physical infrastructure available in industrialized countries. All the others face serious problems particularly in respect of transport and communications and telecommunications.

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241. It is therefore hoped that when the national programmes are finalized and indeed it is necessary to view the national programmes as ongoing dynamic instruments of industrialization, an examination of the impact of the physical infrastructure on the prospects for industrial development will be made. Clearly, the exercise is multidisciplinary and multifunctional and will call for a coordinated and integrated effort on the part of all the agencies involved.

242. It was necessary to maintain proper coordination with activities to be implemented under Transport decade in the above areas.

IV.2. INSTITUTIONAL INFRASTRUCTURE

243. While the physical infrastructure provides the material base for industrialization, the institutional infrastructure provides the brains, thinking process and the impetus for stimulating industrial development. The term "institutional infrastructure" covers a variety of institutions which directly or indirectly affect the process of industrialization.

1. Government

244. Clearly the most important of these institutions is the Government itself. The framing of policies determine whether there exists an "enabling environment" for industrial growth. The policy framework covers fiscal and monetary policy, taxation, exchange rates, import-export regulations, investment codes, licensing procedures and so forth. But even an optimum set of policies would not produce results if the mechanisms of implementation do not function effectively.

245. A review of the national programmes reveals that all member States are conscious of the urgent need to formulate a set of policies conducive to industrial development. Equally, the member States are reviewing and restructuring existing government mechanisms to create the necessary enabling environment. Bureaucratic procedures are being cut down, unnecessary controls and regulations are being removed, investment codes are being redrafted and the working of government agencies reviewed. The entire exercise is aimed at removing impediments and reducing what the World Bank's Long-Term Perspective Study graphically describes as "the high cost of doing business in Africa".

2. The educational system

246. An equally significant component of the institutional infrastructure is the educational system. The strength and capability of the system assumes particular importance in the light of the objective to build up African skills as a basic element of the industrialization process. It is heartening to note that all the national programmes have laid great emphasis on training and education and have reviewed the existing available facilities from primary school to university levels. There is a distinct trend towards promoting technical education and developing a nexus between education, skills requirements and job opportunities.

3. Industrial support services

247. Industrial development needs to be underpinned by a number of industrial support services. These include:

- Research and development agencies;
- Institutions to promote national capability to prepare feasibility studies and project reports;
- Industrial consultancy firms;
- Testing and quality control laboratories;
- Engineering and process design capability;
- Industrial information services;
- Weights and measures and standardization agencies.

248. The national programmes have not dealt intensively with these support institutions, although this may not necessarily mean that nothing is being done. It is suggested that the ministries of industry should undertake a survey with a view to strengthening them and where necessary creating them. This is also a fruitful area for regional and subregional cooperation.

4. Industrial finance

249. The issue of financing the second IDDA is dealt with later in part E of this document. At this stage, we are concerned with the development of a set of financial institutions critical to industrial investment and healthy growth. They include, apart from the Government Treasury:

- National development banks;
- Commercial banks;
- Venture capital agencies;
- Export finance agencies;
- Leasing companies;
- Export credit and guarantee corporations;
- Insurance companies;
- Capital markets;

- Commodity markets

- Stock exchanges.

250. The industrialization of Africa would not be possible without the infrastructural support of these financial institutions. They constitute the hub of industrial and commercial activity in the developed world. Their importance has in fact become greater in Africa today with the current trend towards the promotion of the private sector. Public enterprise had the backing of government funds from the State exchequers, but private enterprises must necessarily be backed by financial institutions both for investment capital and working capital.

251. African financial institutions are today facing a crisis of confidence and in many African countries have virtually broken down. Part of the problem has arisen because many African Governments have tended to use the commercial banking system to finance government deficits, to extend credit to public enterprises which were not creditworthy and to allocate credit on political or personal considerations. The banking system in many African countries has virtually broken down. The most pressing need is to re-establish and restructure the banking system and to immunize it from political interference.

252. Central banks would need to strengthen supervision through regular audit and prescription of ratios. Issues relating to financial institutions go far beyond the second IDDA programme. Nevertheless, it is necessary to recognize their relevance to the success or otherwise of the decade's programme. In this context, it must be said that the national programmes do not, in most cases, examine this issue except peripherally.

IV.3. HUMAN RESOURCE DEVELOPMENT FOR INDUSTRIALIZATION

(a) Strategy for human resource development

253. In modern societies, it is almost axiomatic that the level of economic development is directly proportionate to the level of human resources. The prosperity of the industrialized world is no accident. It is the result of a high level of human capability. The underdevelopment of the African continent, in large measure, reflects the underdevelopment of its human resources.

254. The concept of self-reliance and self-sustainance which constitutes the heart of the Lagos Plan of Action and of IDDA centres around the development of African capabilities in a systematic and integrated fashion. Human resource development is a key theme running through all approaches to African development. In addition to the Lagos Plan of Action and the IDDA, high priority has been accorded to the upgrading of human capability in Africa in APPER, UNPAAERD and in the World Bank's Long-Term Perspective Study entitled "From crisis to sustainable growth". In this context, attention is invited to three substantive papers on this issue prepared by UNIDO:

- "The development of human resources for industrial development of Africa" (ODG.4(SPEC));
- "Strengthening of scientific and technological for industrial development" (ODG.3(SPEC));
- "Accelerated development of indigeneous entrepreneurial capabilities for small- and medium-scale industries in Africa" (ODG.5(SPEC).

255. In the report of the Independent Mid-Term Evaluation Team, the role of human capabilities was linked to the objective of promoting domestic factor inputs as a means towards achieving self-reliance.

256. Taking all these recommendations into consideration, the ninth Conference of African Ministers of Industry (Harare, May 1989) took Decision 13(IX) on the "Development of human resources and technological and entrepreneurial capabilities". The decision "urges African member States and regional/subregional organizations to pay particular attention and priority to the development of industrial skills, particularly technological, engineering and entrepreneurial capabilities, in national human resource programmes and to ensure that adequate resources are earmarked for that purpose in national budgets as well as in technical cooperation programmes with UNDP and with other multilateral and bilateral funding agencies".

The main components of this support programme are:

1. Development of entrepreneurial capabilities

257. For industrialization to take place, there must be people willing to take risks and invest their money in manufacturing. The major role which the public sector plays in Africa stems largely from the lack of an indigenous entrepreneurial class in industry. Policies have to be developed to attract investors to industry and away from mere trading activities, and to upgrade informal sector operators into small- and medium-scale industrialists. Action in this area should include: (i) identifying the class of people to be developed e.g. graduates, school-leavers, retired civil servants, skilled craftsmen in the informal sector; (ii) preparing learning packages and investment opportunity profiles; (iii) developing a package of incentives and head-start programmes including soft loans, guaranteed loans, low equity contribution; (iv) using local consultants for industrial extension services; (v) identifying growth poles and negotiating ancillarization and subcontracting. This programme should go hand in hand with the development of small- and medium-scale enterprises. A national small-scale industries corporation can be established to be the apex organization for all the support mechanisms for entrepreneurship development and small- and medium-enterprise development.

2. Managerial capabilities

258. While the success of industrialized countries is largely due to a combination of entrepreneurship and technology, a major role is played by good business management. Skilled managers are today at a premium in the international market. It is they who optimize operations by bringing about productive coordination between all disciplines in the business, production, materials management, maintenance, quality control, infrastructural support and marketing. Each of these disciplines calls for specialized management skills. It is managers who stimulate productivity, improve input-output ratios and harmonize management-labour relations. Ultimately it is they who produce the profits.

259. It must be frankly admitted that Africa lacks such a cadre of trained managers. While there may be other adverse factors, the relatively poor performance of African industries, public and private, is largely attributable to the absence of sound business management. A major goal of the second IDDA is the creation of a cadre of business managers. Such a cadre would include management skills at all levels - planning, strategy, operations and specialized disciplines. Of practical importance is the need to promote marketing management, which is one of the weaker areas in Africa. Equally in planning the development of management cadres the importance of middle-level management, supervisors and foremen who provide the backbone of plant operations should not be minimized.

3. Training and skills development

260. The first step to be taken is to review the skills scenario of the country. This is a two-way exercise:

(a) Assessing the country's manpower requirements for industrialization, both in terms of numbers and in terms of skill levels;

(b) Taking stock of the existing human resource base. This exercise will reveal the gaps which need to be filled. Such manpower planning exercises have been undertaken in several African countries. They need to be updated on the eve of the second IDDA and with specific reference to the projects and programmes selected for implementation during the Decade.

4. Development of technical capabilities

261. This relates to a higher level of skills. These include skills in research and development; skills in project identification, preparation of feasibility studies and project reports; supervisory and management skills; engineering skills of all kinds; industrial and financial planning skills; and skills for negotiating the procurement of technology equipment and consultancy services, plant erection and installation, etc. Action in this area will include:

- Reviewing the curricula of institutions of higher learning;
- Establishing centres of excellence for specific technical skills training;
- Strengthening existing science and technology and research institutions;
- Developing demand-oriented training programmes by adopting strategies that emphasize skills acquisition through joint ventures, training as part of technology acquisition, internship of public servants in industry and vice versa;
- Funding universities with schools of engineering, establishing a faculty of industrial management with such courses as manufacturing systems analysis and design, manufacturing processes related to core industries in the country, engineering design, production engineering, industrial finance and marketing, energy economics, industrial economics, biotechnology and computer science;
- Developing entrepreneurial and management skills for large-scale public enterprises, through giving greater autonomy to management, together with an incentive scheme for better performance.

5. Integration of women in industrial development

262. A consideration of the question of human resource development and its impact on industrialization would be incomplete without a recognition of the important role which African women can play and indeed are playing in the industrial process. While the national programmes do not make specific reference to this issue, there is widespread awareness in Africa of the need to take positive steps to integrated women into the developmental process.

263. There are four areas in which this integration can take place:

(a) Providing industrial employment to women by removing discriminatory recruitment practices and equalling wage levels;

(b) Identifying jobs where women can be more productive than men (studies conducted in India and the ASEAN countries have shown that in industries where delicate work is called for such as electronics, the productivity of women is higher than that of men);

(c) Advancing women into the managerial ranks;

(d) Promoting and assisting women entrepreneurs.

264. UNIDO has launched a special programme for integration of women in industrial development.

(b) Human resources development in the national programmes

265. Programmes for human resource development and capability-building constitute an important segment of the national programmes.

266. There are in the national programmes proposals to strengthen technical and management institutions as well as vocational training. There are also plans to introduce management courses and entrepreneurship development programmes in the universities. Reforms in the education system to promote technical education are also being undertaken. Moreover, research and development centres in the areas of building materials, leather and so on are being set up. Apprenticeship centres are being promoted in some countries.

PART D. INDUSTRIALIZATION OF AFRICA'S LEAST DEVELOPED COUNTRIES (LDCs)

I. PERFORMANCE OF AFRICAN LDCs DURING THE 1980s

267. Out of the 42 developing countries recognized as LDCs, as many as 29 are located in Africa. Effectively more than 50 per cent of African countries are LDCs. The GDP per capita of African LDCs in 1987 was around US$ 227. The share of industry ranged from 6 per cent to 16 per cent country to country.

268. In 1981, the Substantial New Programme of Action for the 1980s for the Least Developed Countries (SNPA) was adopted in Paris by the first United Nations Conference on the Least Developed Countries with a view to transforming the economies of these countries towards self-sustained development, and enabling them to provide at least internationally accepted minimum standards of nutrition, health, transport and communications, housing and education as well as job opportunities to all their citizens, and particularly to the rural and urban poor. In the decade 1980s, however, throughout which national and international efforts on behalf of these countries were supposed to be intensified, the GDP growth rate attained by the LDCs as a whole has been lower than that recorded in the 1970s: 2.3 per cent per year during 1980-1987, as against a corresponding average of 3.6 per cent in the 1970s. More disappointingly, this growth rate, unlike that of the 1970s, is below that of population (2.4 per cent), which implies a deterioration in per capita terms.

269. Thus, achievement has fallen short of SNPA targets. The SNPA set an annual GDP growth target of 7.2 per cent for the LDCs: the actual average rate has been 2.3 per cent. The SNPA had set an annual growth target of 4 per cent for agricultural production: the actual rate has been 2 per cent. The SNPA had called for manufacturing output in the LDCs to grow at an annual rate of the growth rate of at least 9 per cent: the actual rate has been 2 per cent, less than half of the growth rate reached during 1970s. The SNPA called for the eradication of illiteracy in these countries: the absolute number of illiterates continues to rise. The SNPA had called for Official Development Assistance (ODA) to LDCs to reach 0.15 per cent of donors' GDP but ODA reached only 0.09 per cent. What is more disturbing, the 0.09 per cent figure represents the ODA provided to the present list of 42 LDCs (with a population of 413 million), whereas the 0.15 per cent target had been set for the 31 countries in the LDC list at the time the first United Nations Conference on the Least Developed Countries in 1981 (with a population of 348 million). While aid has lacked behind the needs of LDCs, their trade deficits, debt burden and fiscal imbalances have been growing beyond the proportions previously experienced.

270. Among the factors that were considered as a prerequisite for the successful implementation of the SNPA for the 1980s was a significant increase in financial resources. However, the low domestic savings ratio (in 1987, average domestic savings rate in sub-Saharan Africa was estimated at 4.9 per cent of GDP) did not permit productive investments in the manufacturing sector. In addition, the direct flows of Official Development

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Assistance (ODA) to industries in LDCs have been relatively small although per capita ODA to LDCs stood at US$ 30 compared to US$ 17 to the other developing countries (1988). A UNIDO study concluded that 40 per cent of the external financial flows to the industrial sector came in the form of export credits, about 30 per cent from private bank lending and an average of between 5 to 10 per cent from non-concessional loans from multilateral development finance institutions, the latter registering a sharp drop compared to the situation in 1980. Moreover, the tendency has been to concentrate on "safe markets", with the consequence that many LDCs were excluded.

271. Taking population growth into account, many African LDCs experienced negative growth rates in MVA per capita during the first half of the 1980s. In most of them, MVA also declined in overall terms. In many African LDCs, it would therefore be more accurate to refer to de-industrialization rather than industrialization during the 1980s. Within this rather grim picture, some African LDCs have performed reasonably well. Botswana and Cape Verde had GDP growth rates higher than 2 per cent. Growth of agriculture production was above 4 per cent in Benin, Burkina Faso, Cape Verde and Guinea-Bissau. Botswana, Malawi and Togo succeeded in maintaining gross domestic savings consistently above 10 per cent during the period 1980-1987. However, only one African country, Lesotho, surpassed the annual SNPA target of 9 per cent during 1981-1989.

272. In the African LDCs, the manufacturing sector still predominantly consists of consumer goods industries, with little capacity for the production of intermediate and capital goods. The lack of linkages between industry and the other sectors of the economy has resulted in a heavy dependence of those countries on imported inputs and has hindered accomplishment of any durable structural changes.

273. Except for food processing, the modern manufacturing sector in LDCs tends to be highly import-intensive. Evidence from a UNIDO survey of industries in the African region reveals that in the brewing industry, for instance, virtually all raw materials except water are imported. The same applies to practically all other branches of light and intermediate industries such as softdrink bottling, footwear, leather, apparel and metals. Of the 100 manufactured products produced by the 40 African countries covered in the survey, roughly 55 per cent of the product samples had an import content of close to 100 per cent; only in agro-industries and textiles was the import content under 25 per cent.

274. One consequence of this heavy dependence on imported input is a lack of linkage between the industrial sector and the rest of the economy. Once the LDCs started to experience severe balance-of-payment deficits, as they did throughout the 1980s when commodity prices were low, foreign exchange to obtain the inputs is simply not available, and hence there is a reduction in capacity utilization if not outright closure.

275. In the 1990s, it appears that industry in the LDCs might face a problem of survival rather than development, given the present macroeconomic

environment in most of those countries. Nevertheless, in all LDCs, the manufacturing sector has an important role to play in providing consumer goods and inputs to agriculture, in processing its outputs, and in creating job opportunities, thereby linking the unemployment problems faced by many LDCs with questions relating to the promotion of the private sector and the creation development of small- and medium-scale industries.

II. ACTION PROGRAMME FOR AFRICAN LDCs IN THE SECOND IDDA

276. The second United Nations Conference on the LDCs (UNLDC II) was convened in Paris in September 1990. Drawing on the experience and lessons from the 1980s, the Conference developed and adopted the "Programme of Action for the Least Developed Countries for the 1990s" and a final declaration ("Paris Declaration") proclaiming participants' commitment to implementing this Programme throughout the decade.

277. The Paris Declaration laid down priority areas:

- To conduct a macroeconomic policy review, taking account of market signals and aimed at accelerating long-term growth and development, showing concern for the situation of the most vulnerable groups of the population;

- To develop human resources, by making the individual (men and women) the main protagonist and beneficiary of development, which entails respect for human rights and social justice, and by applying effective population, health, education, training and employment policies;

- To reverse the trend towards environmental degradation, to manage the environment with a view to the effective and durable utilization of natural resources and to reinforce action to deal with disasters;

- To promote an integrated policy of rural development aimed at increasing food production, increasing rural income and expanding non-agricultural activities;

- To develop a diversified productive sector based on private initiative, profitable public enterprises, regional cooperation, greater access to the world market and international action in the field of raw materials.

278. The Programme of Action itself is a comprehensive statement of strategy and policy, which delineates the national and international actions that need to be pursued during the 1990s.

279. It outlines a number of principles that should constitute the basis for action for the least developed countries, their development partners including international organizations, financial institutions and development funds. Concerned non-governmental organizations, including particularly indigenous

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non-govermental organizations, are also requested to participate in the Programme Action.

280. The basic principles stress the following themes: shared responsibility and strengthened partnership as vital to success of the Programme; African least developed countries having the primary responsibility for the formulation and implementation of development policies and priorities; the need for adequate external support by development partners; commitments and strengthened joint efforts by least developed countries and development partners to render the Programme of Action operational, to implement its constituent parts and to ensure coherence and complementarity between national and international efforts.

281. It develops a global framework containing the following elements; macroeconomic framework; financing growth and development (domestic and external resources); external indebtedness of least developed countries; external trade; and strengthening economic and technical cooperation between least developed countries and other developing countries.

282. In the areas of sectoral policies and measures, the Programme of Action includes two broad sections:

1. Mobilizing and developing human capacities in least developed countries;

2. Development, particularly expansion and modernization of the economic base.

III. UNIDO's PROGRAMME FOR AFRICAN LDCs

283. UNIDO's response to the Programme of Action is in three areas:

(a) UNIDO medium-term plan (1990-1995) updated (1992-1997);

(b) Industrial Action Plan for the LDCs;

(c) Ongoing programmes for LDCs.

(a) UNIDO's medium-term plan

284. UNIDO's medium-term plan is not specifically designed for a selected group of countries such as LDCs. Its priorities include:

- human resource development;
- development, expansion and modernization of the economic base;
- promotion of small- and medium-scale industries;
- industrial rehabilitation;

- development and transfer of technology;
- environment and energy.

285. All these areas of action are relevant to the second IDDA and of particular concern to LDCs.

(b) The Industrial Action Plan for LDCs

286. As a follow-up to the Second United Nations Conference on LDCs held in September 1990, preparations are presently under way to draft an industrial plan of action for the LDCs to be adopted by the forthcoming General Conference of UNIDO in November 1991. This plan would be based on a series of studies and analyses of existing conditions, expected and intended changes and the scope for policy intervention covering five main areas:

- mobilizing human capacities in the LDCs;
- improvement of their institutional capabilities;
- industry and economic expansion;
- industrial rural development;
- development of industrial incentives

287. The Industrial Action Plan for LDCs would provide a broad framework for the operationl programmes of UNIDO for the LDCs in the 1990s such as technical cooperation, promotional and programming activities.

IV. ECA's PROGRAMME FOR AFRICAN LDCs

288. Since the adoption, in 1981, of the Substantial New Programme of Action for Least Developed Countries, ECA has set up a special subprogramme for African least developed countries as part of the Programme on Development Issues and Policies in Africa. In addition a special section was created in the structure of the Secretariat to implement the subprogramme.

289. In the 1980s, ECA undertook a number of studies and technical advisory services in favour of African LDCs. Among the main studies and reviews undertaken are (a) a review of economic and social conditions in African LDCs (1980-1989) and the prospects for 1990 and 1991; (b) a review of the implementation of the Substantial New Programme of Action (SNPA) for the 1980s for LDCs; (c) a preliminary evaluation of employment situation in LDCs. The three technical papers dealt with a wide spectrum of key sectors of food, agriculture and manufacturing, debt problems and resources flow; a framework of policy measures for consideration in the 1990s; more investment, new technology and technical support services to improve the productivity of rural economy. ECA has also been involved, in the 1980s in the technical preparation of UNDP round-table conferences for a number of African LDCs.

290. During the period 1991 1997, the ECA activities with respect to African LDCs will be to:

(a) Assess international efforts in the implementation of SNPA with a view to promoting the necessary structural changes required to overcome LDC's extreme economic difficulties through actions such as improving aid modalities, adjusting the volume of aid and its use to development needs of LDCs;

(b) Undertake studies which will assist LDCs in formulating plans and programmes on the basis of appropriate planning methodologies with a view to transforming their economies;

(c) Undertake studies on efficient macroeconomic management, effective mobilization and efficient allocation of domestic resources, including human resources development;

(d) Identify technical cooperation projects for submission to donors for funding;

(e) Organizing the meetings of the Conference of African Least Developed Countries, for consultation on common problems and identification of appropriate actions.

V. NATIONAL PROGRAMMES OF AFRICAN LDCs

291. The majority of African LDCs have prepared their national programmes for the second IDDA. The projections of the LDCs have been included in the earlier analysis in Part C.

292. One significant factor appears in the national programmes of African LDCs. Virtually all of them have adopted World Bank sponsored Structural Adjustment Programmes. This has involved reorientation of policies towards economic liberalization, reduction of the state sector in industry, encouragement of private entrepreneurship and a high priority for capability building and infrastructural development. These approaches are in tune with the strategic approach of the second IDDA.

293. One other factor equally clearly emerges. Most of the LDCs are extremely small (population wise). The setting up of large-scale industrial plants on an optimal basis is not practical. Hence these countries will need to concentrate, as indeed they are doing, on promoting the small and medium sectors and to go in for export-oriented industries, in view of their limited domestic markets. So far as large scale industry is concerned, the most pragmatic course would be for African LDCs to participate in regional and subregional ventures.

PART E. FINANCING THE SECOND IDDA

294. Visions and dreams of development, strategies of industrialization, projects and programmes acquire a sense of reality if they can be backed by financial resources, specifically mobilized and deployed for the purpose. One of the handicaps faced during the first IDDA and one of the reasons, amongst others, why the first IDDA did not come up to expectations, was that the required investment finance was not forthcoming.

295. The financial scenario at the commencement of the second IDDA is rather grim. The debt burden of the continent has reached staggering proportions estimated to be over US$ 250 billion. The debt service ratio of the majority of member States is well over 50 per cent. Most Governments are running large budgetary deficits. Public enterprises are not giving adequate returns on invested capital and many of them have to be supported by the public exchequer. Domestic savings are very low. The capability of Governments to raise tax resources has reached saturation point. The flow of foreign capital has dried up. The continent is today heavily dependent on loans and grants from bilateral donors, World Bank loans, IMF assistance and costly foreign commercial borrowings.

296. This picture is being painted in frank terms not with any intention of dampening the enthusiasm for the second IDDA but only to suggest the urgent need to prevent wastages and unauthorized leakages, to ensure that adequate returns are obtained from existing investments, to determine with great prudence and competence the scale and direction of new investments and to promote the concept of financial discipline. Indeed, financial consciousness is one of the essential ingredients of the industrial culture which Africa is now seeking and must seek to acquire.

297. The financial requirements for the implementation of the second IDDA fall under the following broad categories:

1. Funds for developing the physical infrastructure;

2. Funds for improving the institutional infrastructure including human resource development;

3. Funds for rehabilitation and reconstruction of existing industries;

4. Investment funds for new ventures;

5. Financial resources for technical aid and consultancy.

298. The money required for the first two categories will mainly have to come from the public exchequer. The financing of categories three and four will rest with the Governments so far as the public sector industries are concerned, and it should be noted that in many African countries, the public sector share of industry is dominant. The funds for private investments, and its share is expected to increase, will have to be mobilized from domestic

savings and foreign capital. The financing of category five will largely come from bilateral and multilateral sources.

299. Undoubtedly, the mobilization of appropriate resources is a crucial element for the success of the second IDDA programme. As the prime responsibility for implementing the programme rests with the African countries themselves, with assistance from institutional and private sectors taking the form of partnership, African countries have to mobilize existing and potential national resources, natural, human and financial.

300. Industrial projects should first be determined to be technically and commercially feasible. Thereafter, they could be presented to potential investors and donors, both national and foreign, with emphasis placed on the possibilities of joint implementation of industrial ventures and on support programmes aimed at strengthening human resources.

301. Considering the lead role proposed for the private sector in the second IDDA and in particular, the proposed strengthening of small- and medium-scale industries, there is a need to develop financing arrangements better suited to private industrial activity and more accessible to small- and medium-scale entrepreneurs. The financing of the entire cost of projects could not be expected to be raised from the international community. External funds had to be seen essentially as catalytic and supplementary.

302. The process of mobilizing resources from the implementation of the second IDDA programme needs to be harmonized and coordinated with bilateral and multilateral technical cooperation programmes, and the assistance forthcoming from national and international financing institutions. It is heartening to note that UNDP has announced the earmarking of resources for the second IDDA which has been accepted as a priority programme.

303. The overall second IDDA programme as well as lists of identified national and subregional projects needs to be properly disseminated among all potential implementing partners and aid institutions. It is essential that investment and technical assistance projects be finalized and their feasibility assessed so that they could be used in negotiations with private and institutional sources of financing. Where necessary, project design would need to take into consideration guidelines established by donors which would facilitate funding.

304. The organization of investment promotion fora and donor meetings is also an important means of mobilizing financial resources. It would be necessary to ensure that the resources pledged by the major financial institutions be properly channelled. To this end, it is vital that Africa makes its needs, objectives and strategies clear and demonstrates its own commitment to the programme for the second IDDA.

I. ESTIMATING THE COSTS

305. The exercise of estimating the funding requirements of the second IDDA is, by no means, an easy task. The following elements inherent in the situation have to be kept in mind.

1. We are dealing with a time-frame of 10 years, whereas the plan periods of most African countries cover four or five years. Cost estimations even for these shorter time-frames have gone awry. As a result in many countries, the plans have, de facto, become co-terminus with annual budgetary periods. The experience has been that even over a period of one year, the accuracy of cost forecasting cannot be guaranteed. In this context, the enormity of the problem of attempting to make cost estimations over a period of 10 years will be appreciated.

2. During a decade, a number of uncertainties exist and assumptions have to be made. Amongst these are:

   - the degree of cost escalation;
   - the extent of inflation;
   - the movement of world commodity prices;
   - changes in costs of imported technology, machinery, components, spare parts and raw materials.

3. At this early stage of the second IDDA, African countries have still to finalize their priorities, to allocate resources, to review their national plans and strategies and to decide on the investment portfolio. This is of course, an ongoing process. The pipeline includes projects at various stages:

   - preliminary project ideas;
   - feasibility studies and reports currently under preparation;
   - completed feasibility studies under analysis and consideration for investment;
   - approved projects awaiting financing;
   - projects under construction;
   - projects under commissioning;
   - operating units.

Cost estimates at the earlier stages of these operations cannot possibly be firm and would be in the nature of "guesstimates".

4. A definitional problem also arises. When we speak of the costs of the second IDDA, to what extent should we include the costs of building the physical infrastructure, strengthening the institutional infrastructure and human resource development?

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Certainly, these activities are a necessary foundation for the industrialization process, but they also serve other sectors of the economy and are a part of wider development expenditure. How much of such costs are attributable to industrialization? A question which perhaps has no answer.

5. It is comparatively easier to estimate investment costs and to make a financial plan, where investment decisions are centralized. In countries with comprehensive national planning, with a dominant role of the public sector and with centralized investment decision-making, and till recently a large number of African countries were of this type, cost estimation exercises could be organized. But, as earlier noted, major structural changes have been taking place in Africa in recent years. There is a move towards opening up and liberalization of economies, reducing the role of the public sector, promoting private entrepreneurship and stimulating a market orientation. This makes the calculation more complex since there are imponderables such as the extent of the response of the private sector to the openings being provided to them and particularly the ability of Africa to attract foreign investment in the changed world circumstances.

II. MOBILIZING THE RESOURCES

306. Since the concept of self-reliance implies the reduction and progressive elimination of Africa's present position of dependency on the outside world, there is an in-built presumption that in the matter of financing development, Africa will stand on its own feet and mobilize the funds needed for financing the second IDDA. This, of course, is currently not a practical proposition. Africa's heavy debt burden, its budgetary deficits and the weakness of domestic savings makes foreign assistance an imperative during the decade.

307. The funding sources for the second IDDA include:

(1) Budgetary resources of member States;

(2) Finances provided by the national banking systems including both commercial and development banks;

(3) Loans from the World Bank, IMF and other international financial agencies;

(4) Loans from the African Development Bank and Africa Development Fund;

(5) Loans and grants from bilateral donors;

(6) International commercial loans;

(7) Surpluses of public sector enterprises;

(8) Equity investments by the domestic private sector;

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(9) Foreign investment capital;

(10) Export earnings;

(11) Financial and technical assistance from UNDP;

(12) Financial and technical assistance from other agencies in the United Nations family.

Budgetary resources

308. It is in this area that the member States will need to make the maximum effort to reduce budgetary deficits and to generate income. Among the steps which are being considered by African countries are:

- reduction and elimination of wasteful expenditures;
- reduction in military spending;
- reduction in subsidies financed by the budget;
- cost-effective management of Government and public sector services;
- review of pricing policies of public services, to cover costs;
- review of policies and practices of public enterprises to stimulate surplus generation;
- review of interest rates to stimulate savings;
- review of taxation structure;
- investment based on sound economic criteria after carefully prepared feasibility studies;
- investments preferably in low capital, high yielding and high employment generation industries.

309. As the national programmes reveal, all African countries are engaged in these exercises and in the revamping of public policies aimed at strengthening national budget.

Generating surpluses from public enterprises

310. Heavy investments have been made in public sector enterprises. Until now adequate returns on capital have not been received and in many cases losses of public enterprises have had to be financed from budgetary sources. A major component of the second IDDA programme is the restructuring of public enterprises and upgrading of their performance. Two benefits to resource mobilization will arise if the programme succeeds:

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- Government budgets will be relieved of the responsibility of financing public enterprises losses;
- Surpluses produced by PEs will be available for their own expansion programmes and for other developmental activities.

Encouraging private sector

311. A considerable amount of private capital in Africa is today going into trading activities, mostly in what is described as the informal sector. Since most of these transactions are unaccounted, it is not easy to indicate the quantum of funds involved. The opening up of African economies, encouragement of the growth of the small and medium sectors and promotion of private entrepreneurship should draw these funds into the IDDA activity network.

312. However, if the private sector, particularly small and medium industries are to grow they will require support including availability of bank finance for working capital, long-term loans for investment projects, allocations of foreign exchange for import of plant and equipment, technology, raw materials, spares and components. The mobilization of domestic savings is related to wider macroeconomic issues such as rates of inflation, interest rates and currency stability.

Attracting foreign investment

313. One of the imponderables is the extent to which African countries can attract foreign venture capital to invest in Africa during the second IDDA. The previous exploitation of the continent by foreign companies during the colonial era had naturally created a wall of distrust and there has been a tendency to police, control and regulate foreign investment. The investment code had a regulatory rather than a promotional character.

314. There is now a growing realization that there is in fact no rush of foreign capital waiting to invest in Africa, that the infrastructural and policy environment in most African countries inhibits foreign investment and that there are other new areas such as China and Eastern Europe, which are attracting world capital. Clearly, a special effort will need to be made to make the African environment more attractive, partly by improving the physical and institutional infrastructure, partly by reviewing incentives and partly by revamping Investment Codes. Most of the national programmes have examined this question and have proposed new approaches including revised Investment Codes.

III. FUNDING ESTIMATES IN THE NATIONAL PROGRAMMES

315. It is of course by no means easy for member States to estimate the overall costs of their national programme over a period of 10 years, as projects are at different stages of formulation and implementation.

316. The concept of self-reliance implies that the funding of IDDA programmes

should be the prime responsibility of member States. They would need to allocate budgetary resources for this purpose and also mobilize external resources. It is, however, recognized that in the present socio-economic crisis conditions and ongoing Structural Adjustment Programmes, it might prove difficult for member States to make budgetary allocations for new projects.

317. To overcome the financial constraints at the national level, member States could tap funds from the following sources:

- EEC-ACP Regional Development Fund under the Lomé Convention;
- Assistance from the United Nations system in mobilizing external resources;
- Assistance from the ADB/ECA/UNDP India planned South-South Partnership Centre in mobilizing resources from other developing countries;
- Organization of investment forums and round tables at national and subregional levels on IDDA II projects.

IV. FOREIGN INVESTMENT

318. One of the major sources of funds for industrial development is foreign direct investment (FDI) in industrial ventures. The issue is whether Africa will be able to attract such investments during the closing decade of the century.

319. A recent UNIDO study (PPD.167 of 10 July 1990) on "Foreign Direct Investments: Recent Trends, Major Determinants and Policy Implications" brings out some very revealing facts and figures.

320. The total outflow of FDI in 1988 amounted to the impressive figure of US$ 115 billion. What is even more startling is that the 1989 figure is estimated at US$ 180 billion, a 57 per cent rise in one year. Five countries, United States, United Kingdom, Japan, Germany and France were the source of 80 per cent of FDI.

321. What is however disturbing to developing countries and to Africa in particular is the direction in which FDI is flowing. The developed countries share of FDI flows was as high as 78.8 per cent during the period 1984-1987. As against this all developing countries put together received US$ 11.2 billion i.e. 9-8 per cent of the total FDI outflow. This compares unfavourably with the share of 37.8 per cent in 1981.

322. Within the developing countries, the FDI flow is concentrated on what are evidently perceived to be more attractive areas for investment. Eighteen countries accounted for 86 per cent of the FDI flow to developing countries. Among these are Mexico and Brazil, and the NICs of Asia, Indonesia, South

Korea, Malaysia, Philippines, Singapore and Thailand. The Asian NICs are attracting today the lion's share of FDI flows. The position of LDCs in respect of FDI flows has worsened from 3 per cent of total FDI to 1.4 per cent in 1981.

323. In this scenario, what is the position of Africa? Of all the developing regions, Africa has clearly fared the worst. Its share of FDI flows to developing countries was as low as 8 per cent in 1980. Even this dropped to 5.6 per cent by 1987. It is a chastening thought that in 1987, the whole of Africa received substantially less FDI inflows than the island country of Singapore!

324. As in the other developing regions, the flow of FDI to Africa is concentrated on a relatively small number of countries, practically all of which are oil exporters. During the 1981-1985 period, Algeria, Cameroon, Egypt, Nigeria and Tunisia accounted for almost 90 per cent of FDI inflows into the African region. With the exception of Egypt, all FDI flows into these countries have fallen by varying degrees throughout the 1980s. The sharpest fall was registered by Nigeria. While Nigeria received 463 million SDR in 1982, large-scale disinvestments by companies operating in the oil industry account for the decline to 53 million SDR in 1987. In contrast, Egypt has received over 1 billion SDR. Egypt is now, far and away, the biggest recepient of FDI in the region.

325. The overall decline in FDI inflows into these countries has not been compensated for by the emergence of other countries as significant recipients of FDI. Indeed, of major concern is the failure of middle-income countries like Kenya, Morocco, Zambia and Zimbabwe to attract such investments.

326. Most of the national programmes have, in their projections for the second IDDA, made assumptions about the inflow of FDI. Further, many of the member States are in the process of revamping their policies and redesigning their Investment Codes, with a view to attracting foreign investment. As the UNIDO survey points out FDI flows are extremely sensitive to economic policies in developing countries.

327. The following suggestions are made in the survey:

> Most countries have to do more than adopt a hospitable attitude to foreign investors. Apart from offering a stable and promising economic and political environment, Governments should pay close attention to the regulatory framework and procedures adopted towards prospective investors. Among entry conditions that particularly affect FDI are: controls on foreign exchange transactions (governing import of inputs and payments of dividends, royalties or principal); investment incentives (which may cancel out between countries but still affect the choice between them), subsidies for training or borrowing; effective rates of protection against imports; access to world-price inputs (critical for export-oriented activities); and freedom to choose ownership shares. The most significant of these conditions in the context of future FDI trends

are likely to be those concerning foreign exchange transactions, access to world-price inputs and the freedom to choose ownership shares.

328. In return for granting privileges, increasing use could be made of "performance guarantees", tying investment approval to agreed actions to raise local skills, undertake local research, buy local inputs or export specified amounts. Performance guarantees are an increasingly common feature of FDI negotiations even in developed countries, especially when very large projects are involved, and it is appropriate for developing countries to build them with their bargaining strategies.

329. All this points to the necessity of more active African economic diplomacy with a view to marketing IDDA II projects and attracting foreign investment.

V. FOREIGN AID

330. The financial position of almost all member States is such that economic development in the 1990s would only be possible with the assistance of large-scale injections of development aid from abroad. This has been recognized in the national programmes and member States are in the process of negotiating such aid flows from bilateral and multilateral sources.

331. A recent review (December 1990) by the United Nations Inter-Agency Task Force on the implementation of United Nations Programme of Action for Africa's Economic Recovery and Development (UNPAAERD) of resource flows to Africa during 1986-1990, concluded that net resource flows to Africa in real terms declined sharply, mainly due to disappearance of net export credits and rapidly increasing debt service payments.

332. The notable feature of resource transfers to African countries during that period is, on one hand, the important role played by official flows, which, by 1989 represented about 85 per cent of the totality of flows and, on the other hand, the switch to concessional flows. The virtual disappearance of export credits and international bank lending reflected the incapacity of African countries to attract flows on non-concessional terms. Net flows of foreign direct investment to Africa also remained at dismally low levels, accounting for a small 2.5 per cent of overall net flows in 1989 - compared to more than 12 per cent in 1982.

333. Although the share of official flows has increased, the volume of these flows remained constant in real terms. Similarly, ODA receipts in real terms have stagnated, although in nominal terms ODA increased by 43 per cent in 1989 as compared with 1985. Regarding the composition of official flows, two factors need to be emphasized. First, the majority of non-concessional bilateral flows did not represent flows but consisted mainly of rescheduled debt within the Paris Club; this also reflected the fact that prior to 1989 most of Paris Club debt of African countries was rescheduled on non-concessional terms. Secondly, technical assistance expenditure represented on average about a third of bilateral ODA.

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334. The actual net resource transfer to Africa (net of interest and dividend payments), during the period 1986-1990, in real terms (in 1985 prices and exchange rates), amounted to $8.4 billion on average per year. This amount fell short of estimates made by African countries and by other experts on the financial requirements of Africa over the period. The African countries estimated at the time of submission of APPER in 1985 that the full implementation of the Priority Programme would require the support of external resources equivalent to $46 billion, and about $9 billion annually, on the average, on a net transfer basis. On the other hand, the Advisory Group of Experts on Financial Flows for Africa appointed by the United Nations Secretary-General in 1988 (known as the "Wass Commission") recommended an annual increase in the net financial flow of $5 billion above what was expected to be available in 1987. This target was far from being achieved.

335. What are the prospects of aid flow to Africa in the 1990s. Some indications are available from the international initiatives to mobilize additional resources for Africa. These include:

(1) Special programme of assistance (SPA)

336. The most important international initiative in favour of African countries during the period 1986-1990 was the SPA launched by the World Bank in December 1987. The SPA was originally a three-year (1988-1990) programme set up to help mobilize and coordinate quick disbursing financial assistance and concessional debt relief to support adjustment in the low-income, debt-stressed sub-Saharan countries. SPA included five sources of financing: IDA adjustment lending, co-financing and coordinated financing from bilateral and other multilateral donors, IDA reflows for alleviation of IBRD debt burden, the IMF's Structural Adjustment Facility (SAF) and Enhanced Adjustment Facility (ESAF) and concessional debt relief.

337. The World Bank estimated that within the first SPA, donors and creditors mobilized almost $16 billion in adjustment support (including the value of debt relief). These resources are expected to cover about 95 per cent of balance-of-payments financing needs of SPA-eligible countries. Of the $6.0 billion pledged by bilateral donors under the programme of co-financing and coordinated financing, the World Bank estimated that about half was in addition to assistance already planned for the recipient countries.

338. Donors have recently agreed on the extension of the SPA for another three-year period (1991-1993). The second SPA aims to assure adjustment support of $22.5 billion for eligible countries. The envisaged adjustment support would be additional to investment or project aid. Sixty per cent of this amount would come from concessional loans and grants (with the IMF and the World Bank contributing an amount equivalent to 15 per cent and bilateral and other multilateral agencies providing 30 per cent), and the rest is projected to come from continued concessional debt relief. Bilateral donors had pledged for a total of $8 billion under the co-financing programme.

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(2) Structural adjustment facility (SAF)

339. The International Monetary Fund established in March 1986 a SAF, which is funded by reflows of trust-fund loans financed by IMF gold sales in the 1970s. Subsequently in 1987 the Enhanced Structural Adjustment Facility (ESAF), financed by special contributions in the form of both loans and grants, was established. Under these two facilities, resources are provided on concessional terms to support medium-term structural adjustment in low-income countries facing protracted balance-of-payments problems. SAF and ESAF together can provide about $12 billion in 10-year credits, with 5 1/2 years of grace, at an interest rate of 0.5 per cent. Sixty-two countries are eligible for access to these facilities, including 34 sub-Saharan African countries.

340. At the end of 1990, the amount committed for African countries under SAF was $1.34 billion (about 55 per cent of total SAF commitments), of which $1.29 billion were disbursed (about 60 per cent of total SAF disbursements), and total ESAF resources committed to African countries amounted to $1.77 billion (86 per cent of total ESAF commitments), of which $0.97 billion were disbursed (87 per cent of total ESAF disbursements).

(3) Fourth Lomé Convention

341. The recently concluded Lomé IV arrangement between the European Economic Community (EEC) and the 68 associated African, Caribbean and Pacific (ACP) countries (of which 42 are African countries) provides for increase in resources over Lomé III. The new agreement commits ECU 12 billion ($14.5 billion) for the period 1990-1995, more than 40 per cent nominal increase over Lomé III expenditures. The increase of resources under the Stabex programme by more than 60 per cent in nominal terms is a welcome development especially for the mono commodity-dependent African countries. The terms of assistance were also improved.

(4) IDA

342. Agreement was reached in December 1989 on the ninth replenishment of IDA resources for the three-year period 1991-1993, for an amount equivalent to $15.5 billion. Although in nominal terms IDA-9 represents an increase of 12 per cent over IDA-8, in real terms the value of resources remains unchanged with additional countries, such as Nigeria and Angola, becoming eligible for IDA resources, there will likely be further pressure on IDA lending capacity. The level of support to sub-Saharan Africa countries - currently between 45 and 50 per cent - will be maintained. In the framework of the second SPA, IDA-9 commitments for adjustment support to IDA-only countries in sub-Saharan Africa are programmed at about $2.8 billion during fiscal years 1991-1993.

(5) African Development Bank

343. The capital of the ADB was increased by 200 per cent in 1987. This has permitted a near doubling of annual lending by the main lending arm of the ADB group in the present five-year operational programme (1987-1991).

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344. However, more and more of ADB members are in no position to borrow at 7.4 per cent from the Bank's main lending arm. For more than 30 countries in the region, ADB loans come from the concessional fund of the Bank, the African Development Fund (ADF). For the next five-year operational programme 1992-1996, the Bank plans to intensify actions in reducing poverty in Africa. In this context the sixth replenishment of the ADF which is currently under negotiations, should be given full attention. The ADB is hoping that donors will agree to a 75 per cent increase in the ADF resources, which would mean an injection of $4.75 billion to its concessional lending over the next three years.

345. These initiatives cover only the first three years of IDDA and in the case of the Lomé Convention, the first five years. There are no firm commitments for the 10-year period. However, it would not be unreasonable to assume that the level of aid flows will at least remain the same throughout the decade, at constant prices. As extrapolation, made on the basis of this assumption, gives us an aid flow to Africa figure for 1991-2000 of approximately US$ 170 billion.

346. The figures indicated above represent the total aid flows. It would be difficult to identify how much of this aid flow will go to industry and to IDDA-related programmes. Past trends reveal that aid flows have generally moved to agricultural development, food security, improvement of social services such as education and health and infrastructural development programmes. Undoubtedly, many of these programmes, as is revealed by the national programme for IDDA, are supportive of the IDDA, particularly human resource development and strengthening of the physical and institutional trends. The direct allocations to industry are in the region of 5 to 7 per cent and if these trends continue, an amount of approximately US$ 10 billion may be available specifically for industrial development.

347. While recognizing the importance of foreign aid in Africa's industrialization, there may be negative aspects of tied aid (e.g. over-costing of projects make them non-viable). It is therefore necessary that before accepting foreign tied aid, a careful analysis of cost-effectiveness and impact on the development of the economy should be made.

PART F. IMPLEMENTATION, COORDINATION AND MONITORING

I. IMPLEMENTING THE SECOND IDDA

348. There is a wide gulf between visions and realities, between aspirations and achievements, between plans and programmes and their actual realization. Partly this gulf arises because the plans are themselves unrealistic and therefore inherently unrealizable; partly because mechanisms are not set up to watch continously the progress of implementation, to identify problems and circumstances which demand modifications in approach and to make mid-course corrections.

349. Learning from the lessons of the last decade, the programme for the second IDDA has been built from the grass-roots level on the basis of national programmes. A more realistic view has been taken about priorities. The projects and programmes proposed are modest in scope, are built on African natural resources. The aim is not only to build African industrial capacity but, more importantly, African industrial capability.

350. What is now needed is to ensure that the projected programmes are actually implemented. The responsibility for implementation does not and should not rest solely on the shoulders of the national Governments. The second IDDA is conceived as a participative exercise involving many contributing parties. These include:

- Government at the political level;
- Government at the civil service and bureaucratic levels;
- Managers of public enterprises;
- Investors, entrepreneurs and managers of the private sector;
- Small-scale industrialists;
- The self-employed sector;
- The banking system - developmental and commercial;
- The educational system - universities, technical training institutions, management schools;
- Research and development centres;
- Foreign investors;
- Suppliers of technology and equipment;
- Bilateral aid agencies;
- Multilateral aid agencies;

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- Organizations of the United Nations family;
- The World Bank and IMF;
- Regional institutions;
- Non-governmental organizations.

351. All these agencies and organizations have a definite role to play. An effort needs to be made to generate their interest and secure their fullest support.

II. COORDINATING AND MONITORING THE EFFORT

352. The member States themselves undertook the responsibility of conceiving and articulating their national programmes. Equally, it is their responsibility to ensure implementation and coordination.

353. The framework and guidelines had proposed, for the consideration of the member States, a number of possible mechanisms including:

- A national agro-industries commission;
- A national commission for revitalization of public sector enterprises;
- A specialized wing of the Ministry of Industry to oversee rehabilitation programmes, prevention maintenance and manufacture of spare parts;
- An industrial manpower task force;
- An interdisciplinary team to upgrade the physical infrastructure.

354. The suggested agencies were not intended to be new institutions, expanding the bureaucracy. Their purpose was to build teams out of existing agencies for better coordination, interdisciplinary understanding and adjustment and promotion of an integral programme approach. In their respective fields, these commissions and committees would serve as effective monitoring mechanisms.

355. At the apex level, it would be useful to set up a National Coordinating Committee for the second IDDA. The composition of this Committee should be broad-based including all relevant economic ministries and supporting institutions. The Ministry of Industry should provide the secretariat.

356. At the highest political level, the framework had proposed that a Cabinet committee be appointed with the ministers of industry, finance, planning and agriculture as members, co-opting other ministers as and when intersectoral matters arose. This body would provide the overall policy coordination,

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scrutinize progress reports and authorize necessary adjustments in the approved programme.

357. The national programmes, with a few exceptions, have not considered the question of monitoring, or, at any rate, have made no mention of it in the programme. This may be due to two reasons:

1. The national programmes are at an early stage of formulation and consideration and no doubt it is the intention to set in place the required mechanisms after the programmes have been firmed up;

2. Alternatively, it is possible that the member States have consciously decided not to set up any special mechanisms in the belief that this would only result in the proliferation of the bureaucracy. This was generally the view taken during the first IDDA.

358. The implementation of the programme for the second IDDA needs to be carefully monitored. In this regard, the establishment of institutional arrangements such as interministerial committees to oversee implementation would be desirable.

359. The process of monitoring and implementation should place high emphasis on maintaining timely and efficient communications among all parties involved, as well as reporting on the progress of implementation of national and subregional programmes. Such information should be made available to all those who provide or intend to provide technical and financial assistance.

360. The implementation of the programme should be a flexible process, to allow continuous updating and adaptation to the changing domestic and international environment. It should also facilitate linkages between national and subregional programmes, integration among national projects and complementarity with programmes and projects being financed and executed by other agencies and institutions.

361. Keeping in mind the need for flexibility and pragmatism, individual countries as well as regional groupings may need, during the decade, to incorporate new projects or amend the existing list in accordance with the conclusions of technical and economic feasibility studies.

362. UNIDO and ECA must continue and intensify their efforts to assist countries in further elaborating their national programmes and support the subsequent implementation of national and subregional programmes. Because of limited resources, UNIDO and ECA should focus on projects with high development potential to attract additional financial sources. UNIDO should strengthen its programmes with emphasis on industrial master plans following the Strategic Management Approach to industrial development.

363. It would be necessary to coordinate the IDDA programme with the programme for the United Nations Transport and Communications Decade (UNTACDA) with a view to elaborating joint programmes of mutual interest.

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III. DATA COLLECTION AND PROGRESS REPORTS

364. The process of monitoring implies two sets of action:

1. Ensuring the implementation of approved projects and programmes; and

2. Recording periodically the progress made.

365. The first set of actions would, for practical purposes, need to be decentralized with specific responsibility placed on particular ministries, agencies or institutions directly concerned. Any attempt at overcentralizing this process may only result in creating bureaucratic impediments and may even slow down the progress of implementation.

366. It is in respect of the second set of actions that a central point of reference is absolutely necessary. This point of reference (referred to in the first IDDA as the "focal point") should logically be in the Ministry of Industry. Whether a new cell should be created for the purpose or whether the work should be entrusted to one of the existing units in the Ministry is a matter for each member State to decide. The important point is that some agency is designated to undertake this responsibility.

367. We now turn attention to the actual contents of monitoring and the items whose progress needs to be watched. Two important points need to be stressed at this stage:

1. It would be desirable to identify and agree on a select critical list of items, which will indicate the progress towards industrialization. Any attempt at overcoverage may make the task unmanageable and may result in inability to see the wood for the trees;

2. It is desirable that a common list be adopted by all member countries to facilitate intercountry comparisons and to undertake comprehensive continental analysis of the progress of the second IDDA.

368. A proposed monitoring coverage

Basic data

1. Population

2. Gross domestic product (GDP)

3. Per capita income

4. Manufacturing value add (MVA)

5. Percentage of MVA to GDP

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6. Industrial employment

7. Industrial exports

8. Average capacity utilization

Supporting data

1. Rehabilitation

    (a) Investments in rehabilitation

    (b) Increase in production

    (c) Increased capacity utilization

2. New investments

    (a) Programmes under study

    (b) Projects approved

    (c) Projects under implementation

    (d) Projects commissioned

    (e) Investment costs incurred

    (f) Value of production

3. Infrastructure

    Improvements and extensions in

    (a) Roads

    (b) Railways

    (c) Ports

    (d) Telecommunications

    (e) Energy

    (f) Industrial housing

    (g) Industrial sector

4. Human resource development

    (a) Investments in institutional infrastructure

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(b) Training and educational outputs

(c) Job creation

369. The first task will be to collect up-to-date data on all these items as on 1 January 1991, the commencing year of the second IDDA. Thereafter, periodical updates will be necessary. The periodicity of reporting will vary from country to country depending on the strength and capability of their respective statistical organizations. In some member States, monthly or quarterly figures are being prepared. For the purpose of IDDA monitoring, an annual review and progress report should be adequate.

370. It is proposed that each member State should provide to the secretariats of OAU, ECA and UNIDO (IDDA coordinating unit) the base data for 1991, followed by the progress reports at the expiry of every two years. A consolidated progress report on the implementation of the second IDDA would be presented at the five meetings of the Conference of African Ministers of Industry which will be held during the decade.
